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INTEGRATED BATTLEFIELD EFFECTS RESEARCH FOR THE NATIONAL TRAINING CENTER

Appendix E—Requirements Design Specification and Demonstration
Report for the Exercise Coordination and Control (ECC)
Demonstration System

Science Applications International Corporation
P. O. Box 2351
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Technical Report

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Prepared for
Director
DEFENSE NUCLEAR AGENCY
Washington, DC 20305-1000

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

Research performed to evaluate and develop enhancements for integrated battlefield training at the U.S. Army National Training Center is described. These enhancements had been identified and concepts developed for their application in earlier phases of this research. The report consists of the basic volume summarizing the research tasks, approach, results, conclusions, and recommendations; plus twelve appendices which provide details on the nine major tasks into which the research was divided. Research performed and the associated appendices are as follows:

Development of nuclear and chemical environmental and effects software:
    Analysis of nuclear algorithms   Appendix A
    Requirements specification for nuclear and chemical model algorithms
      at the NTC   Appendix B
    Chemical model algorithm description   Appendix C

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Coordination and Control (ECC) Demonstration System

19. ABSTRACT (Continued)

Demonstration of the system for combining live and notional battalions for training higher level staffs in integrated battlefield (IB) command and control:

Functional requirements analysis for IB command and control simulation	Appendix D
Report on the demonstration	Appendix E

Analysis and design of field simulators for nuclear and chemical warfare:

Technical and operational impacts of field simulators	Appendix F
Capability of off-the-shelf paging system to communicate at Ft. Irwin	Appendix G
Designs of field simulators	Appendix H

Adaptation of nuclear and chemical software to other Army training models:

Feasibility of transferring ARTBASS Code from Perkin-Elmer to VAX	Appendix I
Division/Corps training simulation functional analysis	Appendix J
ARTBASS conversion to VAX	Appendix K
Requirements specification for adding nuclear and chemical models to ARTBASS	Appendix L

This research provided the following products:

Software which models nuclear and chemical environment and effects with appropriate fidelity and timing for training and which is ready for installation on NTC computers.

A demonstrated capability for combining actions of real battalions with computer simulated notional battalions for training brigade/division commanders and staffs.

An analysis of the impacts of using field simulators at the NTC for nuclear and chemical warfare training, and the designs of the selected simulators (i.e., common control system, radiacmeters, dosimeters, chemical detectors).

Analysis of the application of nuclear and chemical models to other Army battalion training models; conversion of the ARTBASS model to operate on the VAX 11/780; incorporation of the nuclear and chemical models into ARTBASS; and demonstration of the nuclear and chemical models using ARTBASS.

CONVERSION FACTORS FOR U.S. CUSTOMARY TO METRIC (SI) UNITS OF MEASUREMENT

To Convert From	To	Multiply By
angstrom	Meters (m)	$1.000\ 000 \times E\ -10$
atmosphere (normal)	Kilo pascal (kPa)	$1.013\ 25 \times E\ +2$
bar	kilo pascal (kPa)	$1.000\ 000 \times E\ +2$
barn	$meter^2\ (m^2)$	$1.000\ 000 \times E\ -28$
British thermal unit (thermochemical)	joule (J)	$1.054\ 350 \times E\ +3$
cal (thermochemical)/cm^2	mega joule/m^2 (MJ/m^2)	$4.184\ 000 \times E\ -2$
calorie (thermochemical)	joule (J)	$4.184\ 000$
calorie (thermochemical)/g	joule per kilogram (J/kg)*	$4.184\ 000 \times E\ +3$
curie	giga becquerel (Gbq) †	$3.700\ 000 \times E\ +1$
degree Celsius	degree kelvin (K)	$t_K = t°_C + 273.15$
degree (angle)	radian (rad)	$1.745\ 329 \times E\ -2$
degree Farenheit	degree kelvin (K)	$t_K = (t°_F + 459.67)/1.8$
electron volt	joule (J)	$1.602\ 19 \times E\ -19$
erg	joule (J)	$1.000\ 000 \times E\ -7$
erg/second	watt (W)	$1.000\ 000 \times E\ -7$
foot	meter (m)	$3.048\ 000 \times E\ -1$
foot-pound-force	joule (J)	$1.355\ 818$
gallon (U.S. liquid)	$meter^3\ (m^3)$	$3.785\ 412 \times E\ -3$
inch	meter (m)	$2.540\ 000 \times E\ -2$
jerk	joule (J)	$1.000\ 000 \times E\ +9$
joule kilogram (J/kg) (radiation dose absorbed)	gray (Gy)*	$1.000\ 000$
kilotons	terajoules	4.183
kip (1000 lbf)	newton (N)	$4.448\ 222 \times E\ +3$
kip/$inch^2$ (ksi)	kilo pascal (kPa)	$6.894\ 757 \times E\ +3$
ktap	newton-second/m^2 $(N-s/m^2)$	$1.000\ 000 \times E\ +2$
micron	meter (m)	$1.000\ 000 \times E\ -6$
mil	meter (m)	$2.540\ 000 \times E\ -5$
mile (international)	meter (m)	$1.609\ 344 \times E\ +3$
ounce	kilogram (kg)	$2.834\ 952 \times E\ -2$
pound-force (lbf avoirdupois)	newton (N)	$4.448\ 222$
pound-force inch	newton-meter (N·m)	$1.129\ 848 \times E\ -1$
pound-force/inch	newton/meter (N/m)	$1.751\ 268 \times E\ +2$
pound-force/$foot^2$	kilo pascal (kPa)	$4.788\ 026 \times E\ -2$
pound-force/$inch^2$ (psi)	kilo pascal (kPa)	$6.894\ 757$
pound-mass (lbm avoirdupois)	kilogram (kg)	$4.535\ 924 \times E\ -1$
pound-mass-$foot^2$ (moment of inertia)	kilogram-$meter^2$ $(kg·m^2)$	$4.214\ 011 \times E\ -2$
pound-mass/$foot^3$	kilogram-$meter^3$ (kg/m^3)	$1.061\ 846 \times E\ +1$
rad (radiation dose absorbed	gray (Gy)*	$1.000\ 000 \times E\ -2$
roentgen	coulomb/kilogram (C/kg)	$2.579\ 760 \times E\ -4$
shake	second (s)	$1.000\ 000 \times E\ -8$
slug	kilogram (kg)	$1.459\ 390 \times E\ -1$
torr (mm Hg, 0° C)	kilo pascal (kPa)	$1.333\ 22 \times E\ -1$

*The gray (Gy) is the accepted SI unit equivalent to the energy imparted by ionizing radiation to a mass and corresponds to one joule/kilogram.

† The becquerel (Bq) is the SI unit of radioactivity; 1 Bq = 1 event/s.

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SECTION 1
INTRODUCTION

As part of Phase III of the Defense Nuclear Agency (DNA) contract, a proof-of-concept demonstration will be given for the Integrated Battlefield Command and Control Simulation (IBCCS) system. This demonstration will show the capability of taking data from both live and simulated histories and combining them at a Division level station. This Division level station is called the Exercise Coordination and Control (ECC) station.

The demonstration will be developed based upon an National Training Center (NTC) operational training scenario. The scenario will contain two OPFOR Motorized Rifle Regiments (MRRs) and two BLUEFOR battalions. Raw data tapes from the April/May rotation will be used to drive the Exercise Monitoring and Control/Training Analysis and Feedback (EMC/TAF) software for one BLUEFOR battalion and one MRR. The Army Training Battle Simulation System (ARTBASS) will be used to provide simulated data for one BLUEFOR battlions and one OPFOR MRR. The scenario required for the demonstration will be prepared based upon the live scenario utilized for the EMC/TAF history.

The primary purpose of the demonstration will be to verify the ECC concept and show the feasibility of combining live and simulated data for the purpose of training the Brigade staff. To conduct the demonstration, software modifications will be required to both the Core Instrumentation Subsystem (CIS) 500 Player system and the battle simulation model. Software will also have to be provided for the ECC history. This document defines the required software additions and modifications.

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SECTION 2
SOFTWARE REQUIREMENTS FOR ECC/TAF

2.1 Architecture of the ECC History

In order to assist in the coordination of simulation and EMC/TAF exercises, and in the preparation of After Action Reviews (AARs), a special exercise history shall be created. This history shall contain unit level data from both live and simulated battalions and from the data entered into the history by the operator through use of interactive menus. The history shall contain only unit level information for a maximum of 240 units.

For purposes of this demonstration, the ECC station shall only provide control for the definition and execution of nuclear events. For all other functions, the ECC station shall be capable of reviewing situations based upon data received from EMC/TAF and ARTBASS on real and notional units, respectively. Data logging capabilities shall also be provided at the ECC station which allows the ECC operator to record the receipt of pertinent information for later display and review.

The ECC history shall be able to occupy any one of the three available NTC history slots. A history slot shall be defined for ECC upon initialization of an ECC history. The initialization process for the ECC history shall be accomplished through both automatic and manual means. The ECC history initialization file shall contain, as a minimum, the unit information associated with the Brigade Under Training. If simulation data will be used in the history, the initialization file will also contain each defined leaf level unit, as well as the higher echelon units associated with those leaf units. The initialization file need not contain any information on the units which are defined in any EMC/TAF histories to be included in the history.

As part of the History Initialization process, the operator will define the data streams which shall be included in the ECC history. For the demonstration, one EMC/TAF and one simulation data stream shall be selected.

To initalize the ECC history, a copy of the current USVT from the selected EMC/TAF history will be modified and written to the ECC history slot. Library functions shall be written to perform the modifications and to write the data to the ECC history. Required modifications to the data contained in the EMC/TAF USVT include the following:

1. Change the Battalion Under Training's next higher echelon pointer from zero to the Brigade Under Training.

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2. Update the unit number pointers (i.e., 1-75) to the new ECC USVT slot numbers.

3. Delete the units defined for the 2nd MRR from the ECC USVT. These units must remain in the EMC/TAF USVT.

The USVT shall be updated as further EMC/TAF units are created in the engagement simulation history.

To fill the USVT with appropriate data from the battle simulation model and ECC, the software will utilize the data provided in the history initialization file. This initialization file, which will be in the same format as the NTC history initialization file, must be set up so that the unit table in the simulation/ECC interface software matches the unit numbers in the USVT.

2.2 Computational Component Processing

Data shall automatically be entered into the ECC/TAF history from the simulation data base and EMC/TAF. Data may also be entered through the interactive menu capability provided with the ECC/TAF history. The data in the ECC/TAF history shall be organized in the same basic manner as an EMC/TAF history. The following processing features shall be provided by the Computational Component (CC).

2.2.1 Unit Position Data Processing - The position location of players defined in the EMC/TAF history shall be provided to the EMC/TAF history via the RDMS/CC interface. From this information, the Master Statistician calculates the center of mass of each defined player unit. For no-player units the operator enters the center of mass through interactive menu selections. The EMC/TAF history shall provide the ECC/TAF history with the center of mass for each defined player and no-player unit.

The battle simulation model shall provide the ECC/TAF history with the position of each unit defined in the simulation. Data will only be provided for leaf level units; the ECC/TAF history shall calculate the center of mass of higher echelon units, based upon the locations of the leaf units.

A Unit Position interactive menu shall be provided for manually entering the position location of ECC defined units.

2.2.2 Unit Engagement Data Processing - Unit engagement data shall be provided to the ECC/TAF history from both the EMC/TAF history and the battle simulation model. No engagement data shall be available for units defined in the ECC/TAF history. The engagement data provided to the

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ECC/TAF history shall be used to generate unit engagement alerts and arrows.

2.2.3 Support Fire Processing - Indirect firing data shall be transmitted from the battle simulation model and the EMC/TAF histories to the ECC/TAF history. The EMC/TAF shall provide the NTC Indirect File Casualty Assessment System (IFCAS) Target Engagement Messages, IFCAS Casualty Messages, IFCAS Alert Messages and History Fire Support Log entries. The simulation shall provide the following information to the ECC/TAF history for each support fire mission: time, target location, firing unit, shell/fuse, number of rounds, and the number of resulting casualties. This information shall be used for generation of the ECC Fire Support Log and generation of the appropriate alerts and graphical symbology.

2.2.4 Nuclear Event Processing - The nuclear environmental data (i.e., fallout prediction, prompt effects radii and radiation fallout contours) calculated by the nuclear model shall be available for display by the ECC/TAF Interactive Display and Control Component. A maximum number of three surface bursts (i.e., fallout producing events) shall be accommodated at one time; additional ground bursts shall be executed as air bursts.

Each history, as well as the simulation, shall have its own nuclear model process. In ECC real history segments, only those nuclear events defined by the ECC controllers shall be executed. In non-ECC real segments, the nuclear models shall be controlled by the appropriate stations. The nuclear model controlled by the ECC/TAF history shall consolidate environmental effects from ECC generated events. Events which occur outside of the ECC/TAF history shall not be combined.

Unit radiation status shall be provided to the ECC history from both the EMC/TAF and ARTBASS. This data shall be used in generation of the Unit Radiation Status report.

2.2.5 Intelligence Processing - The ECC/TAF controller shall enter intelligence data received from and transmitted to the Brigade via the Intelligence interactive menu. All entries made at the Intelligence menu shall be available for display at the tactical display and shall be automatically logged in the Intelligence Log. The display of intelligence symbology shall be controlled by buttons on the BLUEFOR master menu.

2.2.6 Statistical Data Processing - The following statistical displays shall be provided at the support displays:

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1. Task Organization - The superior/subordinate relationship of BLUEFOR and OPFOR live, simulated and ECC-generated units shall be maintained. The task organization shall be available for display by force, as depicted in Figure 1.

2. Fire Support Log - The Fire Support Log shall detail the results of indirect fire missions through the live and simulated history data. Figure 2 depicts the format of the report.

3. Intelligence Log - ECC console operators shall use the Intelligence interactive menu to record intelligence information passed to and received from the Brigade TOC. These data shall be available for display at the tactical display as well as in the Intelligence Log depicted in Figure 3.

4. Prescheduled Event Log - The command and control and intelligence events entered through the prescheduled events menu shall be displayed in a tabular Prescheduled Events Log as depicted in Figure 4.

5. NBC Report Log - ECC controller NBC report input to the Nuclear/ Chemical Report Log menu shall be available for display, as depicted in Figure 5.

6. Nuclear Event Log - The Nuclear Event Log, as depicted in Figure 6. shall indicate the summary information about each nuclear event which has occurred. The status field shall indicate whether the event was executed, cancelled, or not executed.

7. Unit Radiation Status - The Unit Radiation Status report, depicted in Figure 7, shall indicate the radiation status rating (RS0-RS4) for the specified unit for a specified time period.

2.3 Interactive Display and Control Processing

All interactive data display and input/output control capabilities required for operators to monitor and control the ECC shall be provided by this function. To facilitate operator training, the man-machine interface provided by this function shall be similar to that used by the NTC to support EMC/TAF operations.

The graphics tablet shall be the primary man-machine interface device. The graphics tablet layout is depicted in Figure 8.

```
        1         2         3         4         5         6         7         8
1       0         0         0         0         0         0         0         0
TASK ORGANIZATION                     2-123                DD MMM YY HH:MM

XXXXXXXXXXXX
        XXXXXXXXXXXX
                XXXXXXXXXXXX
                XXXXXXXXXXXX
        XXXXXXXXXXXX
            XXXXXXXXXXXX
                    XXXXXXXXXXXX
                    XXXXXXXXXXXX
                    XXXXXXXXXXXX
            XXXXXXXXXXXX
```

Figure 1. Task organization.

TITLE: TASK ORGANIZATION

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading	Description
FIRST COLUMN	The name of a unit defined in the system data base.
SECOND COLUMN	The names of units immediately subordinate to the above listed unit.
THIRD COLUMN	The names of units immediately subordinate to the unit named in the second column.

Similarly, for COLUMNS
FOUR through SIX

DISPLAY CRITERIA:

TIME	The display shall reflect the *task organization* at an operator specified exercise time or, as a default at the exercise time as displayed on the Tactical Display at the time of the display request.

NOTE: The operator specified time must be a time which is included in the current exercise segment. |
| UNIT | The requestor specifies a unit for which task organization data is desired. |

Figure 1.   Task organization (concluded).

```
          1         2         3         4         5         6         7         8
1         0         0         0         0         0         0         0         0

FIRE SUPPORT LOG                              2-123    DD MMM YY HH:MM - DD MMM YY HH:MM

 TIME      TGTNR    TGT LOC    FIRING UNIT  SHELL/FUSE  ROUNDS
DD HH:MM   AANNN  AANNNNNNNN   XX/NN-NNN    AAAAAA/AA    NNN
 EFFECT:   WIA:NN KIA:NN (VEHICLE N)__ (VEHICLE N)__ (VEHICLE N)__ (VEHICLE N)__
```

Figure 2. Fire support log.

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TITLE: FIRE SUPPORT LOG

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading	Description
TIME	Time of mission execution.
TGTNR (IMMED)	Target number of target, "IMMED" if immediate mission with no target number assigned, or group designation if applicable.
TGT LOC	UTM grid location for mission effects/delivery.
FIRING UNIT	Name designation of unit executing mission.
SHELL/FUSE	Type of shell/fuse combination used.
ROUNDS	Number of rounds of ammunition expended in firing.
EFFECT	Description of mission effects for uninstrumented personnel and vehicles (by type), and instrumented losses by player identification.

DISPLAY CRITERIA:

TIME	All data on fire support missions shall be displayed for the entire history at an operator specified time range or, as a default, since the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.

Figure 2. Fire support log (continued).

The fixed portion of this format
occupies one line per entry with
effects on subsequent lines, with
uninstrumented losses followed by
instrumented losses by ID, for as
many lines as necessary.

FORCE

The operator specifies whether
the display is for the BLUEFOR
or OPFOR Fire Support Log.

Figure 2. Fire support log (concluded).

```
                  1         2         3         4         5         6         7         8
1                 0         0         0         0         0         0         0         0

INTELLIGENCE LOG                                DD MMM YY HH:MM - DD MMM YY HH:MM
TIME OF                 REPORTING         RECEIVING
REPORT                    UNIT              UNIT           CATEGORY         METHOD
DDMMMYYHHMM      XXXXXXXXXXXXXXXX    XXXXXXXXXXXXXXXX   XXXXXXXXXXXXX      XXXXXX
    TYPE:XXXXXXXX  DESCRIPTION:XXXXXXXXXXXXXXXXXXXXX
```

Figure 3. Intelligence log.

TITLE: Intelligence Log

DISPLAY TYPE: Tabular

CONTENT:

Column Heading	Description
TIME OF REPORT	Indicates the time of the report.
REPORTING UNIT	Name of the unit making the report.
RECEIVING UNIT	Name of the unit receiving the intelligence report.
CATEGORY	Specifies the category of data. COMBAT INFOR indicates combat information and PROC INTEL indicates processed intelligence.
DETECTION METHOD	For Combat Information, indicates HUMINT for human intelligence, ELINT for electromagnetic intelligence or IMINT for imagery intelligence. This field not used for processed intelligence.
TYPE	For Combat Information, indicates FORCE for force detection, OBSTACLE for obstacle detection or WEATHER for weather data.
SCRIPTION	For force detections indicates the type and number of equipment detected; for obstacle, indicates the type of obstacle detected and for weather indicates the reported weather class. For Processed intelligence, indicates the suspected unit type and echelon.

Figure 3. Intelligence log (continued).

DISPLAY CRITERIA:

TIME   The display shall include all
                              intelligence report data which
                              was defined for the current
                              exercise segment, up to the
                              time of the display request, or
                              for an operator defined time
                              interval. The data will be
                              ordered chronologically.

Figure 3.   Intelligence log (concluded).

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```
          1         2         3         4         5         6         7         8
1         0         0         0         0         0         0         0         0
PRESCHEDULED EVENT LOG - BLUEFOR              DD MMM YY HH:MM - DD MMM YY HH:MM

TIME                  ORIGIN                  TYPE                  CODE NAME
DD HH:MM                NN                    XXXXXXX          XXXXXXXXXXXXXXXX
                 [ASSOCIATED TEXT MESSAGE]
                 [ASSOCIATED TEXT MESSAGE]
                 [ASSOCIATED TEXT MESSAGE]
```

Figure 4. Prescheduled event log.

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TITLE: PRESCHEDULED EVENT LOG

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading	Description
TIME	Time the event was to be displayed to the operator as defined via the Prescheduled Event Definition menu.
ORIGIN	Identification number of the controller station that defined the event.
TYPE	The event tactical category (i.e., Command and Control or Intelligence) as defined by the operator via the Prescheduled Event Definition menu.
CODE NAME	Designator assigned to the event as defined by the operator via the Prescheduled Event Definition menu.
TEXT	Message displayed to the controller as operator defined via the Prescheduled Event Definition menu.

DISPLAY CRITERIA:

TIME	The events shall be displayed for an operator specified time range or, as a default, from the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.
FORCE	Name of force initiating event as defined by the operator via the Prescheduled Event Definition menu.

Figure 4.   Prescheduled event log (concluded).

15

```
        1        2        3        4        5        6        7        8
1       0        0        0        0        0        0        0        0

NBC REPORT LOG                                DD MMM YY HH:MM - DD MMM YY HH:MM

NBC MISSION DATA

  TIME      TRGT POINT  YIELD   HOB    WIND SPD/DIR  VISIBILITY   DOWNWIND DIST
DD HH:MM    AANNNNNNNN   NNN   XXXXXXX   NN/NNN        NNNN           NN


NBC REPORTS

  TIME      PRECEDENCE  CLASSIFICATION   FROM          TO         REPORT TYPE
DD HH:MM    AAAAAAAAA     AAAAAAAA    XXXXXXXXXXXX XXXXXXXXXXXX      NBC-1
            OBSERVER UTM:  AANNNNNNNN
            DIRECTION OF ATTACK: NNN
            DETONATION DD HH:MM
            (ATTACK UTM: AANNNNNNNNN)
            MEANS OF DELIVERY: XXXXXXXX
            TYPE OF BURST: XXXXXXXXX
DD HH:MM    AAAAAAAAA     AAAAAAAA    XXXXXXXXXXXX XXXXXXXXXXXX      NBC-2
            ATTACK UTM: AANNNNNNNNN
            ESTIMATED YIELD:  NNNN
            (STRIKE SERIAL NUMBER: NNNN)
            (DETONATION DD HH:MM)
            (TYPE OF BURST: XXXXXXXXX)
            (MEANS OF DELIVERY: XXXXXXXX)
DD HH:MM    AAAAAAAAA     AAAAAAAA    XXXXXXXXXXXX XXXXXXXXXXXX      NBC-3
            DETONATION DD HH:MM
            ATTACK UTM: AANNNNNNNNN
            EFFECTIVE WINDSPEED: NNNN
            STRIKE SERIAL NUMBER: NNNN
            DIRECTION TO RADIAL LINES: NNN
DD HH:MM    AAAAAAAAA     AAAAAAAA    XXXXXXXXXXXX XXXXXXXXXXXX      NBC-4
            READING LOCATION: AANNNNNNNN
            DOSE RATE: NNNN
            DOSE RATE DD HH:MM
DD HH:MM    AAAAAAAAA     AAAAAAAA    XXXXXXXXXXXX XXXXXXXXXXXX      NBC-5
            STRIKE SERIAL NUMBER: I.NNN
            H+1 DD HH:MM
            ESTIMATED CONTOUR REFERENCE DD HH:MM
            (DECAY RATE: NNNN)
            (CONTOUR LINES: UUUU VVVV WWWW XXXX)
```

Figure 5. NBC report log.

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TITLE: NBC REPORT LOG

DISPLAY TYPE: TABULAR

CONTENT:

Column Heading	Description
PRECEDENCE	Precedence of report (i.e., Flash or Immediate) as defined by the operator via the Nuclear/Chemical Report Log menu.
CLASSIFICATION	Specifies the security class.
FROM	Reporting unit as specified by the operator via the Nuclear/Chemical Report Log menu.
TO	Unit receiving the NBC report as specified by the operator via the the Nuclear/Chemical Report Log menu.
CATEGORY	Type of report (i.e., NBC-1, NBC-2 NBC-3, NBC-4, or NBC-5) logged as defined by the operator via the Nuclear/Chemical Report Log menu.

NBC-1 REPORT:

OBSERVER UTM	Location of unit observing attack, in UTM coordinates, as defined by the operator via the Nuclear/Chemical Report Log menu.
DIRECTION OF ATTACK	Direction of attack in degrees as defined by the operator via the Nuclear/Chemical Report Log menu.
DETONATION TIME	Time of weapon detonation as defined by the operator via the Nuclear/Chemical Report Log menu.
MEANS OF DELIVERY	Means of weapon delivery as defined by the operator via the Nuclear/Chemical Report Log menu.
TYPE OF BURST	Type of burst as defined by the operator via the Nuclear/Chemical Report Log menu.

Figure 5. NBC report log (continued).

NBC-2 REPORT:

ATTACK UTM   Location of attack, in UTM coordinates,
                                    as defined by the operator via the
                                    Nuclear/Chemical Report Log menu.

ESTIMATED YIELD   Estimated yield, in KT, as defined by the
                                    operator via the Nuclear/Chemical Report
                                    Log menu.

STRIKE SERIAL NUMBER   Strike serial number assigned to event as
                                    defined by the operator via the Nuclear/
                                    Chemical Report Log menu.

DETONATION TIME   Time of weapon detonation as defined by
                                    the operator via the Nuclear/Chemical
                                    Report Log menu.

TYPE OF BURST   Type of burst as defined by the operator
                                    via the Nuclear/Chemical Report Log
                                    menu.

NBC-3 REPORT:

DETONATION TIME   Time of weapon detonation as defined by
                                    the operator via the Nuclear/Chemical
                                    Report Log menu.

ATTACK UTM   Location of attack, in UTM coordinates,
                                    as defined by the operator via the
                                    Nuclear/Chemical Report Log menu.

WINDSPEED   Effective windspeed as defined by the
                                    operator via the Nuclear/Chemical Report
                                    Log menu.

STRIKE SERIAL NUMBER   Strike serial number assigned to event
                                    as defined by the operator via the
                                    Nuclear/Chemical Report Log menu.

DIRECTION TO RADIAL LINES   Direction to radial lines as defined
                                    by the operator via the
                                    Nuclear/Chemical Report Log menu.

Figure 5. NBC report log (continued).

NBC-4 REPORT:

READING LOCATION   Location of reading, in UTM coordinates,
                                        as defined by the operator via the
                                        Nuclear/Chemical Report Log menu.

DOSE   Dose rate as defined by the operator
                                        via the Nuclear/Chemical Report Log menu.

TIME OF READING   Time of dose rate reading as
                                        defined by the operator via the
                                        Nuclear/Chemical Report Log menu.

NBC-5 REPORT:

STRIKE SERIAL NUMBER   Strike serial number assigned to event
                                        as defined by the operator via the
                                        Nuclear/Chemical Report Log menu.

H+1 TIME   H+1 time as defined by the operator
                                        via the Nuclear/Chemical Report Log .
                                        menu.

ESTIMATED CONTOUR REFERENCE   Estimated contour reference as
   TIME   defined by the operator via the
                                        Nuclear/Chemical Report Log menu.

DECAY   Decay rate as defined by the operator
                                        via the Nuclear/Chemical Report Log menu.

LINES   1000, 300, 100, and 20 cGy/hour contour
                                        lines, in UTM coordinates as
                                        defined by the operator via the
                                        Nuclear/Chemical Report Log menu.

DISPLAY CRITERIA:

TIME   All data on NBC reports shall be
                                        displayed for the entire history
                                        from the beginning of the history
                                        to the exercise time as displayed on
                                        the Tactical Disply at the time of
                                        the display request or for an
                                        operator defined time interval.

Figure 5.   NBC report log (concluded).

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```
      1         2         3         4         5         6         7         8
1     0         0         0         0         0         0         0         0
----------------------------------------------------------------------------

NUCLEAR EVENT LOG                                          DD MMM YY HH:MM

                                      TARGET      DELIVERY
   TIME          FORCE      AGENT     LOCATION    METHOD       STATUS
DD HH:MM        XXXXXXX   XXXXXXXXX  XXXXXXXXXX  XXXXXXXXX  XXXXXXXXXXXXX
```

Figure 6. Nuclear event log.

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TITLE: Nuclear Event Log

DISPLAY TYPE: Tabular

CONTENT:

Column Heading	Description
TIME	Scheduled time of burst for nuclear event as defined by operator in the interactive menu.
FORCE	Name of force initiating the nuclear event as defined by operator in the interactive menu.
TYPE	Type of nuclear burst (i.e., ground or air) as defined by operator in the interactive menu.
GROUND ZERO	Location of target in UTM coodinates for the nuclear event as defined by operator in the interactive menu.
YIELD	Weapon yield in KT as defined by operator in the interactive menu.
STATUS	The status of the nuclear event, i.e., cancelled, executed and not executed. Not executed nuclear events shall be scheduled events occurring in a null segment).

DISPLAY CRITERIA:

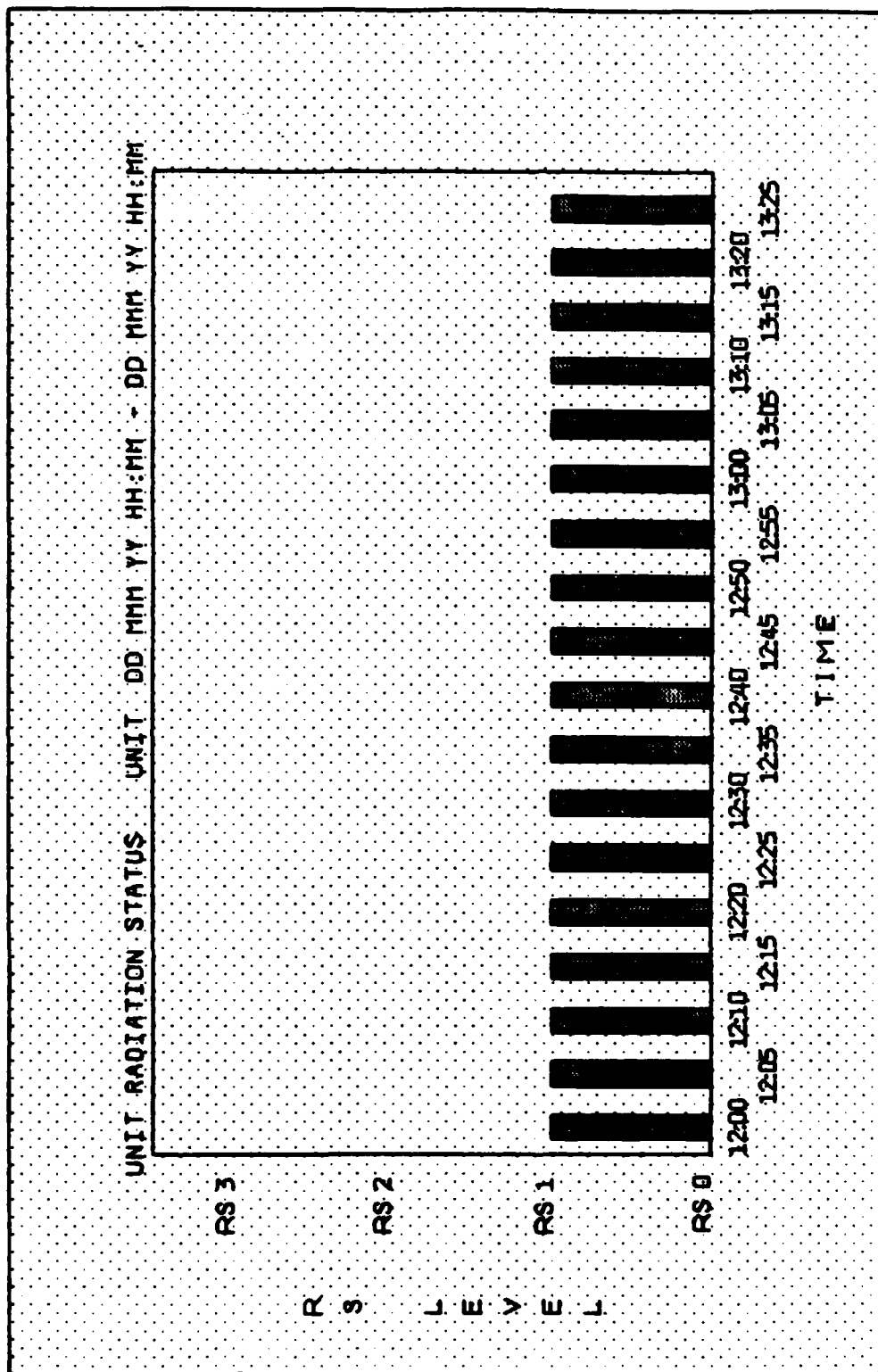| TIME	All data on nuclear events shall be displayed for the entire history from the beginning of the history to the exercise time as displayed on the Tactical Display at the time of the display request.

Figure 6.   Nuclear event log (concluded).

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Figure 7. Unit radiation status log.

TITLE: UNIT RADIATION STATUS

DISPLAY TYPE: GRAPHICAL

CONTENT:

Column Heading	Description
RS LEVEL	The Radiation Status (RS) of leaf units based upon the radiation dose of the unit as calculated by the nuclear model as follows: RS-0 for 0 cGy, RS-1 for 1-70 cGy, RS-2 for 71-150 cGy and RS-3 for over 150 cGy.

For higher echelon units, the RS status for the attached leaf
units are summed and assigned as follows:

Radiation status category of company or battalion	Number of platoons in company or number of companies in battalion					
	3	3	4	5	6	7
	Sum of RS numbers of all platoons or companies					
RS-0	0	0-1	0-1	0-2	0-2	0-3
RS-1	1-2	2-4	2-5	3-7	3-8	4-10
RS-2	3-4	5-7	6-9	8-13	9-14	11-17
RS-3	5-6	8-9	10-12	15-15	15-18	18-21

DISPLAY CRITERIA:

TIME	The display shall reflect the reports logged at an operator specified time or as a default, at the time displayed on the Tactical Display at the time of the display request.

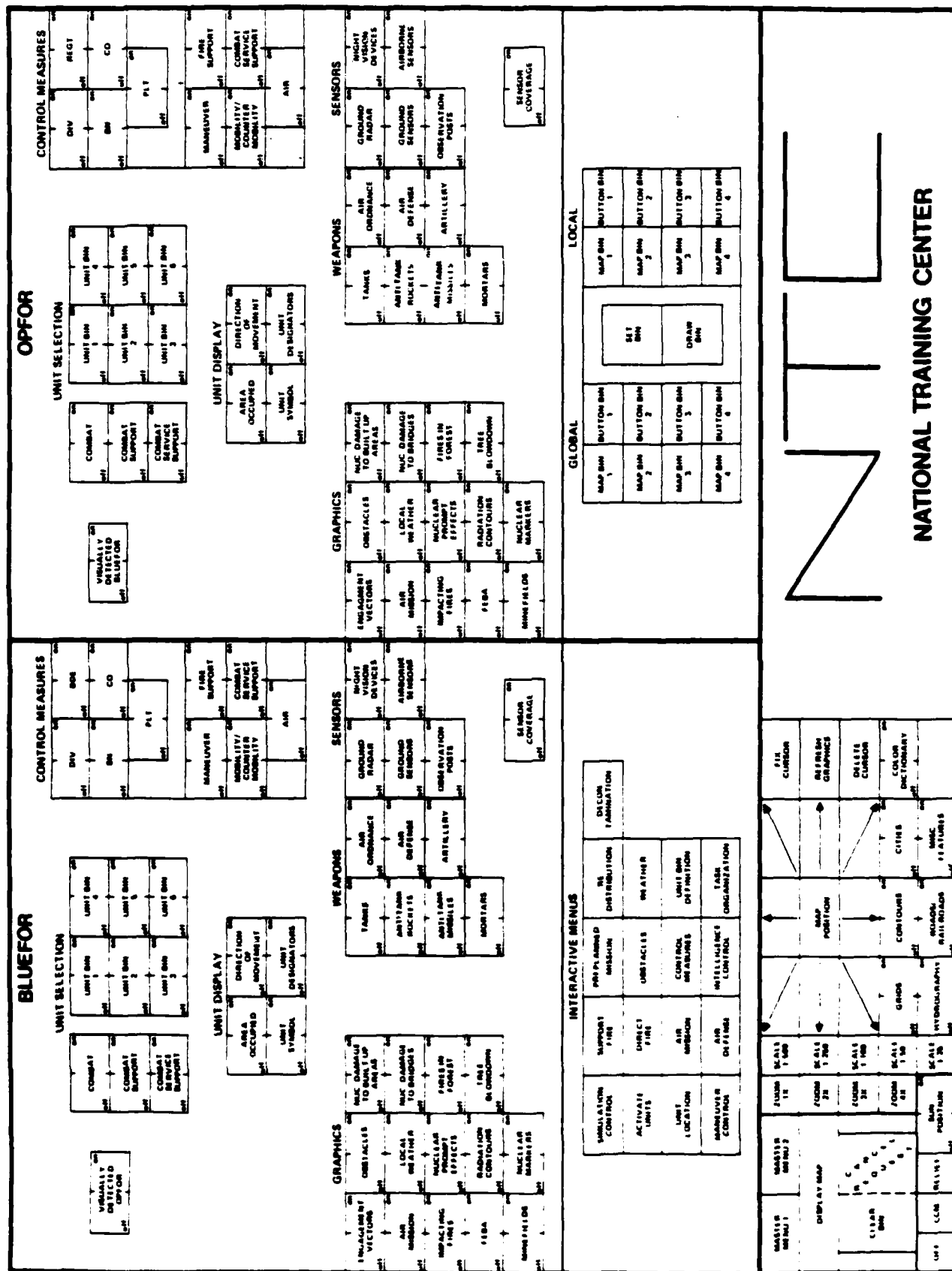Figure 7. Unit radiation status log (concluded).

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Figure 8. ECC Graphics table layout.

The following modes of operation, selectable by graphics tablet buttons, shall be provided:

1. Real-time mode

2. Historian mode

3. Edit AAR mode

4. Run AAR mode

Each of the modes shall be mutually exclusive. In the real-time mode, the station tactical display shall reflect the current real-time state of the exercise. In historian mode, historian buttons shall be provided which allow random access to different past time periods of the exercise segment. The edit AAR mode shall provide the operator with the capability of creating/editing a command file for use during an AAR. The run AAR mode shall read an AAR file and translate each command in the file into a request for execution.

2.3.1 Map Displays - The means to display and manipulate a color background of the Ft. Irwin area, upon which tactical symbology is overlayed, shall be provided in the same manner as is provided for the 500 Player CIS system.

2.3.2 Interactive Menus - The means to display master menus and interactive tactical/operational menus shall be provided. A standard interactive menu topology, which is compatible with that used by the EMC/TAP shall be utilized. This compatibility will assist in the training of operator personnel and improve the operational efficiency of data entered through either the color monitor display or the alphanumeric support display.

A standard set of display primitives, as defined in the 500 Player CIS RDS shall be employed for implementation of the menu system. The means to make selections from lists, define static symbology on the digital map, enter numeric and alphanumeric data, and terminate operations of the menu shall be provided. Cues to the operator shall be used to indicate the type of data that must be entered and shall provide feedback to the operator which indicates when a selection has been made.

The master menus shall be displayed over the entire background map display area on the tactical display. Tactical/operational menus , shall be provided using both tactical and support display capabilities.

2.3.3 Master Menus - Each master menu shall be displayed in a single color. Specifically, Master Menu 1 shall be displayed in blue and Master Menu 2 shall be displayed in

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red. Highlightling shall be employed to indicate when a
function key is on (i.e, activated). A cursor, controlled
by the graphic pen/tablet, shall be overlayed on the master
menu displays to assist in function key selection.

2.3.4 Tactical/Operational Menus at Tactical Display - The
following tactical/operational menus, as depicted in
Figures 9 through 16, shall be provided for interactive
control of the ECC/TAP history:

    1. History Initialization/Termination

    2. Exercise Segment Definition

    3. History Segment Selection

    4. Unit Definition

    5. Task Organization

    6. Control Measures

    7. Unit Position

    8. Intelligence

2.3.5 Tactical/Operational Menus at Support Display - The
tactical/operational menus to be provided on the ECC/TAP
support display, as depicted in Figures 17 through 20, shall
include:

    1. Prescheduled Event Definition

    2. Nuclear/Chemical Report Log

    3. Nuclear Event Definition

    4. Decontamination

2.3.6 Tactical Symbology - The following types of dynamic
and static tactical symbology shall be displayable over the
background map:

    1. Unit symbol in FM 21-30 format

    2. Control measures

    3. Unit engagement vectors

    4. Prompt nuclear effects display

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	INITIALIZE TERMINATE DELETE	Defines selection of action to be performed.
IF INITIALIZE:				
2	Alpha/ Numeric Entry	ENTER HISTORY NAME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to History.
3	List	ENTER SOURCE OF DATA FOR THE 1ST BATTALION	'SIMULATION' followed by a list of EMC/TAF histories.	Specifies whether the data for the 1st ECC battalion originates from the simulation data base or one of the EMC/TAF histories.
4	List	ENTER SOURCE OF DATA FOR THE 2ND BATTALION	'SIMULATION' followed by a list of EMC/TAF histories.	Specifies whether the data for the 2nd ECC battalion originates from the simulation data base or one of the EMC/TAF histories. Entry is optional.
5	List	ENTER SOURCE OF DATA FOR THE 3RD BATTALION	'SIMULATION' followed by a list of EMC/TAF histories.	Specifies whether the data for the 3rd ECC battalion originates from the simulation data base or one of the EMC/TAF histories. Entry is optional.
6	List	-- --	IGNORE DONE	Specifies manner of entry completion.

Figure 9. Menu: History initialization/termination/deletion.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF TERMINATE:				
2	List	HISTORY	List consisting of the names of the available history .	Defines selection of history to be terminated.
3	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IF DELETE:				
2	List	HISTORY	List containing the names of all closed history .	Defines selection of history to be deleted.
3	List	--- ---	IGNORE DONE	Specifies manner of entry completion.

Figure 9. Menu: History initialization/termination/deletion (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	HISTORY	List consisting of the names of the available histories.	Defines selection of history for which segments will be opened. Current segment (if any) will automatically be closed.
2	List	TYPE	NULL REAL	Defines menu display options.
IF NULL:				
3	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IF REAL:				
3	Numeric Entry	DATE	6 spaces to be filled in from Numeric pad.	Specifies day/month/year of exercise segment.
4	List	NUCLEAR/CHEMICAL OPTION	INCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES INCLUDE ONLY NUCLEAR CAPABILITIES INCLUDE ONLY CHEMICAL CAPABILITIES EXCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES	Specifies if nuclear and/or chemical capabilities are to be utilized.

Figure 10. Menu: Exercise segment definition.

DISPLAY GROUP		TYPE	TITLE	CONTENT	DESCRIPTION
IF INCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES:	5	List	CONTINUATION OF RADIATION AND/OR CHEMICAL CONTAMINATION	CONTINUE BOTH NUCLEAR RADIATION AND CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT CONTINUE ONLY NUCLEAR RADIATION FROM PREVIOUS SEGMENT CONTINUE ONLY CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT NO CONTINUATION FROM PREVIOUS SEGMENT	Specifies if nuclear radiation and/or chemical contamination shall be continued from previous exercise segment.
IF CONTINUE BOTH RADIATION AND CHEMICAL CONTAMINATION, ONLY RADIATION, OR ONLY CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:	7	Numeric Entry	NULL SEGMENT TIME INTERVAL	5 spaces to be filled in from Numeric pad.	Specifies a length of time (radiation/chemical contamination shall accumulate for preceding null segment) in the format HH:MM.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
9	Numeric Entry	OPPOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPPOR scenario.
10	Numeric Entry	INTENSITY INDEX CODE	BLUE OPPOR PLANNING TIME AVAIL ___ ___ FIRE SUPPORT ___ ___ ARTILLERY ___ ___ MORTAR ___ ___ NUCLEAR ___ ___ CHEMICAL ___ ___ BIOLOGICAL ___ ___ SMOKE ___ ___ AIR DEFENSE ___ ___ ENGINEER ___ ___ EW ___ ___	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
11	Alpha/ Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
12	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
13	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
14	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXAAA.
15	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
16	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
17	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XXX. Up to 8 units may be identified.
18	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Reconnaissance in force 06 Raid 11 Defend in sector 12 Defend from a battle area 13 Delay in sector 14 Delay forward of a specified line for a specified time 15 Disengagement 16 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
19	List	Bn OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED:				
21	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
22	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
23	List	STATISTICAL UNITS	List of all BLUEFOR and OPPOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
24	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
25	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
26	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
27	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
23	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
25	List	--- ---	IGNORE DONE	Specifies manner of entry completion.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP NO CONTINUATION OF RADIATION OR CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				
7	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
8	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
9	Numeric Entry	INTENSITY INDEX CODE	BLUE OPPOR ---- ----- PLANNING TIME AVAIL ___ ___ FIRE SUPPORT ___ ___ ARTILLERY ___ ___ MORTAR ___ ___ NUCLEAR ___ ___ CHEMICAL ___ ___ BIOLOGICAL ___ ___ SMOKE ___ ___ AIR DEFENSE ___ ___ ENGINEER ___ ___ EW ___ ___	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
10	Alpha/ Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
11	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
12	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night
13	Alpha/Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXAAA.
14	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
15	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
16	Alpha/Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XXX. Up to 8 units may be identified.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
17	List	TYPE OF Bn OPERATION/MISSION CODE	101 Movement to contact 102 Hasty attack 103 Deliberate attack 104 Exploitation and pursuit 105 Reconnaissance in force 106 Raid 111 Defend in sector 112 Defend from a battle area 113 Delay in sector 114 Delay forward of a specified line for a specified time 115 Disengagement 116 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
18	List	Bn OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.
19	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.

IF COMPANY MISSION CODES ARE ASSIGNED:

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTEXT	DESCRIPTION
20	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.
21	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
22	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
23	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
24	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
25	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessment. Up to 10 EI numbers may be assigned.
26	List	--	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
20	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
21	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
22	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.

Figure 10. Menu: Exercise Segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
23	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
24	List	--- ---	IGNORE DONE	Specifies manner of entry completion.
IF INCLUDE ONLY NUCLEAR CAPABILITIES OR IF INCLUDE ONLY CHEMICAL CAPABILITIES:				
6	List	CONTINUATION OF RADIATION/CHEMICAL CONTAMINATION	CONTINUE RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT NO CONTINUATION OF RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT	Specifies if radiation/chemical contamination shall be continued from previous segment.
IF CONTINUE RADIATION/CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				
7	Numeric Entry	NULL SEGMENT TIME INTERVAL	5 spaces to be filled in from Numeric pad.	Specifies a length of time radiation/chemical contamination shall continue for preceding null segment, in the format HH:MM.
8	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
9	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
10	Numeric Entry	INTENSITY INDEX CODE	BLUE OPFOR PLANNING TIME ____ ____ AVAIL ____ ____ FIRE SUPPORT ____ ____ ARTILLERY ____ ____ MORTAR ____ ____ NUCLEAR ____ ____ CHEMICAL ____ ____ BIOLOGICAL ____ ____ SMOKE ____ ____ AIR DEFENSE ____ ____ ENGINEER ____ ____ EW ____ ____	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
11	Alpha/ Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
12	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
13	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night
14	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXAAA.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
15	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
16	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
17	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XX. Up to 8 units may be identified.
18	List	TYPE OF Bn OPERATION/MISSION CODE	101 Movement to contact 102 Hasty attack 103 Deliberate attack 104 Exploitation and pursuit 105 Reconnaissance in force 106 Raid 111 Defend in sector 112 Defend from a battle area 113 Delay in sector 114 Delay forward of a specified line for a specified time 115 Disengagement 116 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
19	List	Bn OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED: 21	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
22	List	COMPANY OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
23	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
24	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
25	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
26	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
27	List	---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
23	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
25	List	---	IGNORE DONE	Specifies manner of entry completion.
IF NO CONTINUATION OF RADIATION/ CHEMICAL CONTAMINATION FROM PREVIOUS SEGMENT:				

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
8	Numeric Entry	OPPOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPPOR scenario.
9	Numeric Entry	INTENSITY INDEX CODE	BLUE OPPOR ——— ——— PLANNING TIME AVAIL —— —— FIRE SUPPORT —— —— ARTILLERY —— —— MORTAR —— —— NUCLEAR —— —— CHEMICAL —— —— BIOLOGICAL —— —— SMOKE —— —— AIR DEFENSE —— —— ENGINEER —— —— EW —— ——	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
10	Alpha/ Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
11	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
12	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

F Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
13	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXAAA.
14	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
15	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
16	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AAX-XXX. Up to 8 units may be identified.
17	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Reconnaissance in force 06 Raid 11 Defend in sector 12 Defend from a battle area 13 Delay in sector 14 Delay forward of a specified line for a specified time 15 Disengagement 16 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
18	List	Bn OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
19	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED:				
20	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
21	List	COMPANY OPERATIONS MODIFIER CODE	101 Passage of lines 102 Hasty attack 103 Relief in place 104 Exploitation and pursuit 105 Road march 106 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
22	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
23	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
24	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
25	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
26	List	---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
20	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
21	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
22	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
23	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
24	List	---	IGNORE DONE	Specifies manner of entry completion.
IF EXCLUDE BOTH NUCLEAR AND CHEMICAL CAPABILITIES:				

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Numeric Entry	BLUEFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of BLUEFOR scenario.
7	Numeric Entry	OPFOR SCENARIO #	2 spaces to be filled in from Numeric pad.	Specifies 2 digit code number of OPFOR scenario.
8	Numeric Entry	INTENSITY INDEX CODE	BLUE OPFOR —— —— PLANNING TIME — — AVAIL — — FIRE SUPPORT — — ARTILLERY — — MORTAR — — NUCLEAR — — CHEMICAL — — BIOLOGICAL — — SMOKE — — AIR DEFENSE — — ENGINEER — — EW — —	Specifies intensity index code where: 1 = Low 2 = Medium 3 = High
9	Alpha/ Numeric Entry	KEY TRAINING OBJECTIVE CODE #	10 spaces to be filled in from Alpha/Numeric pad.	Specifies five 2 character codes.
10	Numeric Entry	VISIBILITY CODE	1 space to be filled in from Numeric pad.	Specifies visibility code where: 1 = Clear 2 = Dust 3 = Fog 4 = Rain
11	Numeric Entry	DAY/NIGHT CODE	1 space to be filled in from Numeric pad.	Specifies day/night code where: 1 = Day 0 = Night

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
12	Alpha/ Numeric Entry	Bn DESIGNATION	7 spaces to be filled in from Alpha/Numeric pad.	Specifies Battalion designation in format X-XXXXX.
13	Numeric Entry	Bn DAY AT NTC	2 spaces to be filled in from Numeric pad.	Specifies number of days spent so far at NTC.
14	Numeric Entry	Bn TIMES THROUGH INDICATED SCENARIO	2 spaces to be filled in from Numeric pad.	Specifies number of times this unit has run through this scenario.
15	Alpha/ Numeric Entry	ASSIGNED/ATTACHED UNITS	6 spaces to be filled in from Alpha/Numeric pad.	Specifies designation of assigned/attached units in format AX-XXX. Up to 8 units may be identified.
16	List	TYPE OF Bn OPERATION/MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Reconnaissance in force 06 Raid 11 Defend in sector 12 Defend from a battle area 13 Delay in sector 14 Delay forward of a specified line for a specified time 15. Disengagement 16 Counterattack	Specifies tactical mission assigned to Battalion for exercise segment.
17	List	Bn OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to Bn mission. Selection of modifier is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
18	List	SELECT UNIT FOR ASSIGNMENT OF COMPANY MISSION CODE	List of assigned/attached units previously identified for which company operation/mission codes shall be defined.	Specifies unit for which company mission codes shall be defined. Up to 8 units may be selected, with company mission codes being requested for each selected unit. Selection of a unit is optional.
IF COMPANY MISSION CODES ARE ASSIGNED: 19	List	COMPANY MISSION CODE	01 Movement to contact 02 Hasty attack 03 Deliberate attack 04 Exploitation and pursuit 05 Raid 11 Occupy a battle position 12 Hasty defense 13 Deliberate defense 14 Defend to retain a battle position 15 Create and defend a strongpoint (deliberate defense) 21 Patrol operations	Specifies tactical mission assigned to selected company for exercise segment. Selection of company mission code is optional.

Figure 10. Menu: Exercise segment definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
20	List	COMPANY OPERATIONS MODIFIER CODE	01 Passage of lines 02 Hasty attack 03 Relief in place 04 Exploitation and pursuit 05 Road march 06 Occupation of assembly area	Specifies modification to tactical mission of selected company. Selection of modifier is optional. Upon entry completion operator prompted to select next assigned/attached unit for assignment of company mission code. This procedure is repeated until all assigned/attached units have been assigned a company mission code or until the operator does not select an available assigned/attached unit for assignment of a company mission code.
21	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
22	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
23	Alpha/Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
24	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.

Figure 10. Menu: Exercise segment definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
25	List	---	IGNORE DONE	Specifies manner of entry completion.
IF COMPANY MISSION CODES ARE NOT ASSIGNED:				
19	List	STATISTICAL UNITS	List of all BLUEFOR and OPFOR player units currently identified in system data base.	Specifies units for which statistics shall be collected/maintained during the exercise segment.
20	List	OC ASSESSMENT	"BLUEFOR" followed by a list of all BLUEFOR units (both player and no player) currently identified in system data base.	Specifies units for which OC assessor ID and EI number assignments are to be made.
21	Alpha/ Numeric Entry	OC ID	3 spaces to contain entries from Alpha/Numeric pad.	Specifies ID of OC to perform assessment of BLUEFOR unit selected above.
22	Numeric Entry	EI NUMBERS	3 spaces to contain entries from Numeric pad.	Specifies EI numbers assigned to unit for later assessments. Up to 10 EI numbers may be assigned.
23	List	---	IGNORE DONE	Specifies manner of entry completion.

Figure 10. Menu: Exercise Segment definition (concluded).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	LIST	HISTORY	List containing the names of the available histories.	Defines selection of history.
2	LIST	SEGMENTS	List of segments comprising history selected above.	Defines selection of segment to be viewed/monitored.
3	LIST	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 11. Menu: History segment selection.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	CREATE UNIT CHANGE UNIT SYMBOL	Defines selection of action to be performed.
IF CREATE UNIT:				
2	List	FORCE	BLUEFOR OPFOR	Specifies menu selection option.
IF BLUEFOR:				
3	Alpha/Numeric Entry	DESIGNATOR (LINE ORGANIZATION)	15 spaces to be filled in from alpha/numeric pad.	Specifies designator and line organization for the unit.
4	List	TASK ORGANIZATION	"NONE" followed by list of units in accordance with the force selected above.	Specifies initial task organization.
5	List	UNIT SYMBOL	MECH INFANTRY ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies type of unit symbol.

Figure 12. Menu: Unit definition.

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	List	LOCATION	SPECIFY INITIAL LOCATION NO INITIAL LOCATION	Allows operator to select initial location of the unit.
IF SPECIFY INITIAL LOCATION:				
7	Area	SELECT LOCATION	-- --	Cursor position on map defines unit location.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO INITIAL LOCATION:				
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF OPPOR:				
3	Alpha/Numeric Entry	DESIGNATOR (LINE ORGANIZA-TION)	15 spaces to be filled in from alpha/numeric pad.	Specifies designator and line organization for the unit.
4	List	TASK ORGANIZATION	"NONE" followed by list of units in accordance with the force selected above.	Specifies initial task organization.
5	List	UNIT SYMBOL	MOTORIZED RIFLE REGIMENT ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE	Specifies type of unit symbol.

Figure 12. Menu: Unit definition (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
			ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	
6	List	LOCATION	SPECIFY INITIAL LOCATION NO INITIAL LOCATION	Allows operator to select initial location of the unit.
IF SPECIFY INITIAL LOCATION:				
7	Area	SELECT LOCATION	-- --	Cursor position on map defines unit location.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO INITIAL LOCATION:				
7	List	-- --	IGNORE REPEAT	Specifies manner of entry completion.
IF CHANGE UNIT SYMBOL:				
2	List	FORCE	BLUEFOR OPFOR	Defines menu display options.

Figure 12. Menu: Unit definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BLUEFOR:				
3	List	UNIT	List of all displayable BLUEFOR units previously created by the operator.	Defines unit for which symbol will be changed.
4	List	UNIT SYMBOL	MECH INFANTRY ARMOR INFANTRY ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE AIR DEFENSE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies new unit symbol.
5	List	-- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF OPFOR:				
3	List	UNIT	Lists of all displayable OPFOR units previously created by the operator.	Defines unit for which symbol will be changed.

Figure 12.   Menu: Unit definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
4	List	UNIT SYMBOL	MOTORIZED RIFLE ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies new unit symbol.
5	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 12. Menu: Unit definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPPOR	Defines menu display options.
2	List	TYPE	ECC-GENERATED SIMULATION	Specifies type of unit.
3	List	UNIT	List of BLUEFOR or OPPOR, ECC-GENERATED or SIMULATION, units, (in accordance with FORCE and TYPE above).	Defines selection of unit whose task organization shall be modified.
4	List	TASK ORGANIZATION	"NONE" followed by a list of all BLUEFOR or OPPOR, ECC-GENERATED or SIMULATION, units previously created by the operator.	Defines selection of new task organization for specified unit.
5	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 13. Menu: Task organization.

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	ADD DELETE	Defines action to be performed.
2	List	FORCE	BLUEFOR OPFOR WHITE	Defines menu display options.
IF BLUEFOR/ OPFOR ADD:				
3	List	TACTICAL CATEGORY	MANEUVER FIRE SUPPORT INTELLIGENCE MOBILITY/COUNTERMOBILITY COMBAT SERVICE SUPPORT AIR DEFENSE	Defines selection of functional tactical category of control measure. More that one tactical category may be selected.
4	List	ECHELON	IF BLUEFOR: IF OPFOR: PLT PLT CO CO BN BN BDE REGT	Defines selection of echelon of control measure.
5	List	TYPE	POINT LINE AREA	Defines selection of type of control measure.

Figure 14. Menu: Control measures.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF POINT: 6	List	CONTROL MEASURE	CHECKPOINT COORDINATION POINT START POINT RELEASE POINT PASSAGE POINT POINT OF DEPARTURE REMOTE SENSOR PREPLANNED TARGET RADIOLOGICAL MARKER	Defines selection of point to be created.
IF CHECK POINT, COORDINATION POINT, START POINT, RELEASE POINT, PASSAGE POINT, POINT OF DEPARTURE, REMOTE SENSOR, PREPLANNED TARGET: 7	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of a name is optional.
8	Area	CHOOSE POINT ON MAP	-- ---	Cursor position on map defines selected point.
9	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF RADIOLOGICAL MARKER:				
7	Numeric Entry	DOSE RATE	4 spaces to be filled in from Numeric pad.	Specifies dose rate of contamination in marked area.
8	Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field, in the format DDMONYY.
9	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field, in the format HH:MM.
10	Alpha/ Numeric Entry	BURST DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date nuclear blast occurred, in the format DDMONYY.
11	Numeric Entry	BURST TIME	5 spaces to be filled in from Numeric pad.	Specifies time nuclear blast occurred, in the format HH:MM.
12	Area	CHOOSE POINT ON MAP	--- ---	Cursor position on map defines selected point.
13	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF CHEMICAL MARKER:				
7	List	AGENT	PERSISTENT NERVE PERSISTENT BLISTER NONPERSISTENT NERVE NONPERSISTENT BLOOD	Specified type of agent employed.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field; in the format DDMONYY.
9	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field; in the format HH:MM.
10	Area	CHOOSE POINT ON MAP	-- --	Cursor position on map defines selected point.
11	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LINE:				
6	List	CONTROL MEASURE	BASIC LINE AXIS OF ADVANCE PHASE LINE TANK DITCH CONCERTINA DIRECTION OF ATTACK/ROUTE BOUNDARY LINE TRACE OF FEBA FEBA LIMIT OF ADVANCE LINE OF DEPARTURE LD/LC PROBABLE LINE OF DEPLOYMENT FSCL RESTRICTIVE FIRE LINE COORDINATED FIRE LINE MAIN SUPPLY ROUTE PASSAGE LANE	Defines selection of line to be created.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BASIC LINE, TANK DITCH, PHASE LINE, AXIS OF ADVANCE, CONCERTINA, OR MAIN SUPPLY ROUTE:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of name is optional.
9	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected point.
10	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DIRECTION OF ATTACK/ ROUTE:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assignd to control measure. Entry of name is optional.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
9	Area	CHOOSE TWO TO TWELVE POINTS ON MAP. LAST POSITION INDICATES DIRECTION.	-- --	Cursor positions on map define selected points. Last position indicates direction.
10	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BOUNDARY LINE:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
9	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
10	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF TRACE OF FEBA, LIMIT OF ADVANCE, LINE OF DEPARTURE:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	--	Cursor positions on map define selected points.
9	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LD/LC, FEBA, PASSAGE LANE, PROBABLE LINE OF DEPLOYMENT:				
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	--	Cursor positions on map define selected points.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF FSCL, RPL, CPL:				
7	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time the line becomes effective.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with the control measure. Selection of unit designation is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
10	List	-- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF AREA: 6	List	CONTROL MEASURE	BASIC AREA AREA OF OPERATION ASSEMBLY AREA ATTACK POSITION DROP ZONE FIRE SUPPORT BASE LANDING ZONE PARP OBJECTIVE PATROL BASE PICKUP ZONE SCATTERABLE MINEFIELD SUPPORT AREA GROUP OF TARGETS RESTRICTIVE FIRE AREA NO FIRE AREA CONTAMINATED AREA BATTLE POSITION MINEFIELD GAP/BRIDGE	Defines area control measure to be created.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF BASIC AREA, CONTAMINATED AREA, AREA OF OPERATION, ATTACK POSITION, DROP ZONE, FIRE SUPPORT BASE, LANDING ZONE, OBJECTIVE, PATROL BASE, PICKUP ZONE, SUPPORT AREA, BATTLE POSITION:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF ASSEMBLY AREA:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	--- ---	Cursor positions on map define selected points.
10	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF FARP:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	--- ---	Cursor positions on map define selected points.
9	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF GROUP OF TARGETS:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- ---	Cursor positions on map define selected points.
10	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RPA:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
9	Alpha/Numeric Entry	STARTING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA becomes effective; in the format DDHHMM.
10	Alpha/Numeric Entry	ENDING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA terminates; in the format DDHHMM.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
11	Area	CHOOSE UP TO TWELVE POINTS ON MAP	--- ---	Cursor positions on map define selected points.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO FIRE AREA:				
7	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
8	List	UNIT DESIGNATION	A list of all BLUEFOR or OPFOR player units previously created by the operator.	Defines selection of unit designation associated with this control measure.
9	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of effect.
10	Area	CHOOSE UP TO TWELVE POINTS ON MAP	--- ---	Cursor positions on map define selected points.
11	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF SCATTERABLE MINEFIELD:				
7	List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies day, time, and month of mine self-destruct.
9	List	MINE TYPE	ANTITANK ANTIPERSONNEL MIXED	Determines mine symbols to be entered within boundaries.
10	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
11	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GAP/ BRIDGE:				
7	Area	CHOOSE UP TO SIX POINTS FOR FIRST SIDE OF GAP/BRIDGE	-- --	Specifies first side of gap/bridge.
8	Area	CHOOSE UP TO SIX POINTS FOR SECOND SIDE OF GAP/BRIDGE	-- --	Specifies second side of gap/bridge.
9	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF MINEFIELD:				
7	List	STATUS	CURRENT PROPOSED	Defines status of area to be created.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define area.
9	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BLUEFOR/ OPPOR DELETE:				
3	List	TACTICAL CATEGORY	MANEUVER FIRE SUPPORT INTELLIGENCE MOBILITY/COUNTERMOBILITY COMBAT SERVICE SUPPORT AIR DEFENSE	Defines selection of functional tactical category of control measure to be deleted. Only one selection available.
4	List	ECHELON	IF BLUEFOR: PLT CO BN BDE IF OPPOR: PLT CO BN REGT	Defines selection of echelon of control measure to be deleted.
5	List	CONTROL MEASURE ID	List of control measure IDs, of all BLUEFOR/OPPOR control measures in system (in accordance with TACTICAL CATEGORY and ECHELON selections made above).	Defines selection of control measures to be deleted. Multiple selections may be made.
6	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF WHITE ADD:				
3	List	TYPE	POINT LINE AREA	Defines selection of type of control measure.
IF POINT:				
4	List	CONTROL MEASURE	CHECKPOINT COORDINATION POINT START POINT RELEASE POINT PASSAGE POINT POINT OF DEPARTURE REMOTE SENSOR PREPLANNED TARGET RADIOLOGICAL MARKER	Defines selection of point to be created.
IF CHECK POINT, COOR-DINATION POINT, START POINT, RELEASE POINT, PASSAGE POINT, POINT OF DEPAR-TURE, REMOTE SENSOR, PRE-PLANNED TAR-GET:				
5	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of a name is optional.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Area	CHOOSE POINT ON MAP	--- ---	Cursor position on map defines selected point.
7	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RADIOLOGICAL MARKER:				
5	Numeric Entry	DOSE RATE	4 spaces to be filled in from Numeric pad.	Specifies dome rate of contamination in marked area.
6	Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field; in the format DDMONYY.
7	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field; in the format HH:MM.
8	Alpha/ Numeric Entry	BURST DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date nuclear blast occurred; in the format DDMONYY.
9	Numeric Entry	BURST TIME	5 spaces to be filled in from Numeric pad.	Specifies time nuclear blast occurred; in the format HH:MM.
10	Area	CHOOSE POINT ON MAP	--- ---	Cursor position on map defines selected point.
11	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF CHEMICAL MARKER:				
5	List	AGENT	PERSISTENT NERVE PERSISTENT BLISTER NONPERSISTENT NERVE NONPERSISTENT BLOOD	Specifies type of agent employed.
6	Alpha/ Numeric Entry	MARKER DATE	7 spaces to be filled in from Alpha/Numeric pad.	Specifies date marker was placed in the field; in the format DDMONYY.
7	Numeric Entry	MARKER TIME	5 spaces to be filled in from Numeric pad.	Specifies time marker was placed in the field; in the format HH:MM.
8	Area	CHOOSE POINT ON MAP	---	Cursor position on map defines selected point.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF LINE:	List	CONTROL MEASURE	BASIC LINE AXIS OF ADVANCE PHASE LINE TANK DITCH CONCERTINA DIRECTION OF ATTACK/ROUTE BOUNDARY LINE TRACE OF FEBA FEBA LIMIT OF ADVANCE LINE OF DEPARTURE LD/LC PROBABLE LINE OF DEPLOYMENT FSCL RESTRICTIVE FIRE LINE COORDINATED FIRE LINE MAIN SUPPLY ROUTE PASSAGE LANE	Defines selection of line to be created.
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
IF BASIC LINE, TANK DITCH, PHASE LINE, AXIS OF ADVANCE, CONCERTINA, MAIN SUPPLY ROUTE: 6	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assigned to control measure. Entry of the name is optional.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected point.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DIRECTION OF ATTACK/ ROUTE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator to be assignd to control measure. Entry of name is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP. LAST POSITION INDICATES DIRECTION.	-- --	Cursor positions on map define selected points. Last position indicates direction.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF BOUNDARY LINE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF TRACE OF FEBA, LIMIT OF ADVANCE, LINE OF DEPARTURE:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
7	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF LD/LC, FEBA, PASSAGE LANE, PROBABLE LINE OF DEPLOYMENT:				

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
5	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
6	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF PSCL, RPL, CPL:				
5	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alf' Numeric pad.	Specifies time the line becomes effective.
6	List	UNIT DESIGNATION	A list o. .1 white player units previously created by the operator.	Defines selection of unit designation associated with the control measure. Selection of unit designation is optional.
7	Area	CHOOSE TWO TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
8	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF AREA:				
4	List	CONTROL MEASURE	BASIC AREA AREA OF OPERATION ASSEMBLY AREA ATTACK POSITON DROP ZONE FIRE SUPPORT BASE LANDING ZONE FARP	Defines area control measure to be created.

Figure 14. Menu: Control measures (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IP BASIC AREA, CONTAMINATED AREA, AREA OF OPERATION, ATTACK POSITION, DROP ZONE, FIRE SUPPORT BASE, LANDING ZONE, OBJECTIVE, PATROL BASE, PICKUP ZONE, SUPPORT AREA, BATTLE POSITION:			OBJECTIVE PATROL BASE PICKUP ZONE SCATTERABLE MINEFIELD SUPPORT AREA GROUP OF TARGETS RESTRICTIVE FIRE AREA NO FIRE AREA CONTAMINATED AREA BATTLE POSITON MINEFIELD GAP/BRIDGE	
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Alpha/Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator name assigned to control measure. Entry of name is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF ASSEMBLY AREA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF FARP:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
7	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GROUP OF TARGETS:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from Alpha/Numeric pad.	Specifies designator or name assigned to control measure. Entry of name is optional.
7	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
8	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF RPA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure. Selection of unit designation is optional.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	Alpha/Numeric Entry	STARTING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA becomes effective; in the format DDHHMM.
8	Alpha/Numeric Entry	ENDING TIME	6 spaces to be filled in from Alpha/Numeric pad.	Specifies time the RPA terminates; in the format DDHHMM.
9	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
10	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NO FIRE AREA:				
5	List	STATUS	CURRENT PROPOSED	Defines status of control measure.
6	List	UNIT DESIGNATION	A list of all white player units previously created by the operator.	Defines selection of unit designation associated with this control measure.
7	Alpha/Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of effect.
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	---	Cursor positions on map define selected points.
9	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF SCATTERABLE MINEFIELD:				
5	List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.
6	Alpha/ Numeric Entry	DATE TIME GROUP	11 spaces to be filled in from Alpha/Numeric pad.	Specifies day, time, and month of mine self-destruct.
7	List	MINE TYPE	ANTITANK ANTIPERSONNEL MIXED	Determines mine symbols to be entered within boundaries.
8	Area	CHOOSE UP TO TWELVE POINTS ON MAP	-- --	Cursor positions on map define selected points.
9	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF GAP/ BRIDGE:				
5	Area	CHOOSE UP TO SIX POINTS FOR FIRST SIDE OF GAP/BRIDGE	-- --	Cursor positions on map specify first side of gap/bridge.
6	Area	CHOOSE UP TO SIX POINTS FOR SECOND SIDE OF GAP/BRIDGE	-- --	Cursor positions on map specify second side of gap/bridge.
7	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF MINEFIELD:				
5	List	STATUS	CURRENT PROPOSED	Defines selection of area to be created.
6	Area	CHOOSE UP TO TWELVE POINTS ON MAP	--- ---	Cursor positions on map define area.
7	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF WHITE DELETE:				
3	List	CONTROL MEASURE ID	List of control measure IDs of all white control measures.	Defines selection of control measure to be deleted. Multiple selections may be made.
4	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 14. Menu: Control measures (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPPOR	Defines menu display option.
2	List	UNIT	List of BLUEFOR or OPPOR ECC-generated units (in accordance with FORCE selection made above).	Defines selection of unit to be postioned.
3	Area	SELECT POSITION ON MAP	-- --	Cursor position on map defines unit position.
4	List	-- --	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 15. Menu: Unit position.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	ACTION	ADD DELETE	Defines action to be performed.
IF ADD:				
2	List	REPORTING UNIT	List of all BLUEFOR units.	Defines unit reporting intelligence data.
3	List	RECEIVING UNIT	List of all BLUEFOR units.	Defines unit receiving intelligence data.
4	Alpha/Numeric Entry	TIME OF REPORT	11 spaces to be filled in from Alpha/Numeric pad.	Specifies time of intel report.
5	List	CATEGORY	COMBAT INFORMATION PROCESSED INTELLIGENCE	Defines menu display options.
IF COMBAT INFORMATION:				
6	List	DETECTION METHOD	HUMAN ELECTROMAGNETIC IMAGERY	Defines method used for collecting intelligence data.
7	List	TYPE	FORCE DETECTION OBSTACLE DETECTION WEATHER DATA	Defines type of combat information.

Figure 16. Menu: Intelligence.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF FORCE DETECTION:				
8	List	EQUIPMENT/TROOPS	TANK ANTITANK APC TRUCK INDIRECT FIRE AIR DEFENSE HELICOPTER HIGH PERFORMANCE AIRCRAFT SENSORS FOOTSOLDIER	Specifies type of equipment or troops detected.
9	Numeric Entry	NUMBER	2 spaces to be filled in from numeric pad.	Specifies number of pieces of equipment/troops detected.
10	Area	ENTER POINT ON MAP	-- --	Specifies location of detected force equipment.
11	List	-- --	IGNORE REPEAT	Specifies manner of entry completion.
IF OBSTACLE DETECTION:				
8	List	TYPE	GENERAL MASS CONCERTINA FIXED WALL DITCH MINEFIELD CRATER FIELD	Specifies type of detected obstacle.
9	Area	CHOOSE UP TO 12 POINTS ON MAP	-- --	Cursor positions define reported location of obstacle.

Figure 16. Menu: Intelligence (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF WEATHER DATA:				
8	List	WEATHER CLASS	CLEAR OVERCAST HAZE RAIN FOG OR DUST	Specifies type of weather reported.
9	AREA	ENTER POINT ON MAP	--- ---	Defines origin of weather report.
10	List	--- ---	IGNORE REPEAT DONE	Defines method of entry completion.
IF PROCESSED INTELLIGENCE:				
6	List	SUSPECTED UNIT TYPE	MECH INFANTRY ARMOR INFANTRY AIR DEFENSE ARTILLERY SELF-PROPELLED ARTILLERY ANTITANK ELECTRONIC WARFARE ARMY AVIATION AIRBORNE INFANTRY AIR CAVALRY CHEMICAL DEFENSE ARMORED CAVALRY ENGINEER MEDICAL SIGNAL TRANSPORTATION SUPPLY AND SERVICE	Specifies type of suspected unit.

Figure 16. Menu: Intelligence (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
7	List	SUSPECTED ECHELON	REGIMENT BATTALION COMPANY PLATOON	Specifies suspected echelon of unit. Entry is optional.
8	AREA	SUSPECTED UNIT LOCATION	--- ---	Cursor location indicates suspected location of unit.
9	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DELETE:				
2	List	INTELLIGENCE ITEM	List of all intelligence data previously entered by operator.	Specifies intelligence data to be deleted. Intelligence items identified by reporting unit, receiving unit and time of report.
3	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 16. Menu: Intelligence (concluded).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force initiating event.
2	List	TACTICAL CATEGORY	COMMAND AND CONTROL INTELLIGENCE	Defines prescheduled event operation.
3	List	ACTION	DEFINE EDIT CANCEL	Defines menu display options.
IF DEFINE OR EDIT:				
4	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from alpha/numeric keypad.	Specifies designator or name assigned to event.
5	Alpha/ Numeric Entry	MESSAGE	Maximum 3 lines of 80 characters each to be filled in from alpha/numeric keypad.	Prompt to be displayed to controller.
6	Alpha/ Numeric Entry	EVENT TIME	11 spaces to be filled in from the alpha/numeric pad.	Specifies time the event is to occur.
7	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF DELETE:				
4	Alpha/ Numeric Entry	CODE NAME	16 spaces to be filled in from the alpha/numeric pad.	Specifies event to be deleted.

Figure 17. Menu: Prescheduled event definition.

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
5	List	---	IGNORE REPEAT DONE	Specifies manner of entry completeion.

Figure 17. Menu: Prescheduled event definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force receiving report.
2	List	CATEGORY	NBC-1 REPORT NBC-2 REPORT NBC-3 REPORT NBC-4 REPORT NBC-5 REPORT	Specifies the type of log item to be entered.
3	Alpha/Numeric Entry	TIME OF REPORT	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies time of the NBC report.
4	List	PRECEDENCE	FLASH IMMEDIATE	Specifies precedence of the report.
5	List	SENDING UNIT	List of BLUEFOR or OPFOR units in accordance with selection above.	Specifies unit that generated the report.
6	List	RECEIVING UNIT	List of BLUEFOR or OPFOR units in accordance with selection above.	Specifies unit that received the report.
IF NBC-1: 7	Alpha/Numeric Entry	OBSERVER LOCATION	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies location of unit observing attack, in UTM coordinates.
8	Alpha/Numeric Entry	DIRECTION OF ATTACK	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported direction of attack in degrees. Entry is optional.
9	Alpha/Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported time of detonation.

Figure 18. Menu: Nuclear/chemical report log.

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
10	Alpha/Numeric Entry	DELIVERY METHOD	8 spaces to be filled in from the Alpha/Numeric pad.	Specifies the reported means of delivery.
11	List	TYPE OF BURST	GROUND AIR	Specifies the reported type of burst.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NBC-2: 7	Alpha/Numeric Entry	GROUND ZERO	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies the reported location of the burst, in UTM coordinates.
8	Alpha/Numeric Entry	YIELD	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported yield.
9	Alpha/Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported strike serial number. Entry is optional.
10	Alpha/Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported burst time. Entry is optional.
11	List	TYPE OF BURST	GROUND AIR	Specifies the reported type of burst. Entry is optional.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NBC-3: 7	Alpha/Numeric Entry	TIME OF BURST	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported burst time. Entry is optional.

Figure 18. Menu: Nuclear/chemical report log (continued).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
8	Alpha/ Numeric Entry	GROUND ZERO	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported location of a burst, in UTM coordinates.
9	Alpha/ Numeric Entry	WINDSPEED	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported windspeed.
10	Alpha/ Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported strike serial number.
11	Alpha/ Numeric Entry	DIRECTION TO RADIAL LINES	3 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported direction to radial lines.
12	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF NBC-4: 7	Alpha/ Numeric Entry	READING LOCATION	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies location of reading in UTM coordinates.
8	Alpha/ Numeric Entry	DOSE RATE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported dose rate.
9	Alpha/ Numeric Entry	TIME OF READING	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported time of dose rate reading.
10	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 18. Menu: Nuclear/chemical report log (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF NBC-5:				
7	Alpha/Numeric Entry	STRIKE SERIAL NUMBER	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies strike serial number.
8	Alpha/Numeric Entry	B+1 TIME GROUP	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported B+1 time.
9	Alpha/Numeric Entry	CONTOUR TIME GROUP	11 spaces to be filled in from the Alpha/Numeric pad.	Specifies estimated contour reference.
10	Alpha/Numeric Entry	DECAY RATE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies reported decay rate. Entry is optional.
11	Alpha/Numeric Entry	1000 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 1000 cGy/hour contour line. Entry is optional.
12	Alpha/Numeric Entry	300 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 300 cGy/hour contour line. Entry is optional.
13	Alpha/Numeric Entry	100 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 100 cGy/hour contour line. Entry is optional.
14	Alpha/Numeric Entry	20 CGY/HR CONTOUR LINE	4 spaces to be filled in from the Alpha/Numeric pad.	Specifies 20 cGy/hour contour line. Entry is optional.
15	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 18. Menu: Nuclear/chemical report log (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPFOR	Defines force initiating the nuclear event.
2	List	ACTION	DEFINE NUCLEAR MISSION EDIT NUCLEAR MISSION CANCEL NUCLEAR MISSION	Defines menu display options. Only 10 nuclear events may be defined; 3 of which may produce fallout. If additional events are entered they will not be processed.
IF DEFINE NUCLEAR MISSION:				
3	Alpha/Numeric Entry	TIME	DD MON YR _:_ _ (current date displayed for edit (if required) followed by 4 spaces to be filled in with HH:MM values).	Specifies execution date and time of nuclear event.
4	Alpha/Numeric Entry	TARGET POINT	10 spaces to be filled in from alpha/numeric pad.	Specifies UTM coordinate of target.
5	Numeric Entry	YIELD	0.2 KT 1 KT 2 KT 3 KT 5 KT 8 KT 10 KT 20 KT 50 KT 100 KT	Specifies the yield of the weapon package.

Figure 19. Menu: Nuclear event definition.

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
6	Numeric Entry	HEIGHT OF BURST	GROUND AIR	Specifies whether the burst will produce fallout. Only 3 ground bursts may be entered. If more than 3 are entered, only the first 3 will be executed.
7	Alpha/ Numeric Entry	WIND SPEED	3 spaces to be filled in from numeric pad.	Specifies the wind speed in KM/HR. Default set to 20 KM/HR.
8	List	WIND DIRECTION	3 spaces to be filled in from numeric pad.	Specifies the wind direction in degrees (valid range 1 to 360).
9	Numeric Entry	VISIBILITY	4 spaces to be filled in from numeric pad.	Specifies the visibility in kilometers.
10	Numeric Entry	DOWNWIND DISTANCE TO ZONE 1	2 spaces to be filled in from numeric pad.	Specifies the Downwind distance to zone 1, in kilometers. Used to create fallout prediction display.
11	List	-- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 19. Menu: Nuclear event definition (continued).

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DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
IF EDIT NUCLEAR MISSION:				
3	List	NUCLEAR MISSION	List of nuclear missions previously defined.	Defines selection of nuclear mission to be updated/modified. Missions shall be identified by time, yield, and ground zero. NOTE: Upon selection of mission, all parameters describing the nuclear mission are displayed for review.
IF CANCEL NUCLEAR MISSION:				
3	List	NUCLEAR MISSION	List of nuclear missions previously defined.	Defines selection of nuclear mission to be cancelled. Missions shall be identified by time, yield, and ground zero.
4	List	---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 19. Menu: Nuclear event definition (concluded).

DISPLAY GROUP	TYPE	TITLE	CONTENT	DESCRIPTION
1	List	FORCE	BLUEFOR OPPOR	Defines menu display options.
2	List	TYPE	NUCLEAR CHEMICAL	Defines type of decontamination.
IF NUCLEAR:				
3	List	UNIT	List of nuclear contaminated units in accordance with force selected above.	Specifies unit that was decontaminated.
4	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.
IF CHEMICAL:				
3	List	UNIT	List of chemically contaminated units in accordance with force selected above.	Specifies unit that was decontaminated.
4	List	--- ---	IGNORE REPEAT DONE	Specifies manner of entry completion.

Figure 20. Menu: Decontamination.

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5. Unit Contamination Indicators

6. Fallout prediction

7. Downwind hazard

8. Reported intelligence

Figure 21 depicts the set of symbology which shall be used by the ECC/TAF history. Two distinct methods to control unit display shall be available at the ECC station. First, the ECC controller shall have the capability of displaying selected units from the live and/or the simulated battalions through a matrix similar to that used for the 500 player EMC/TAF system. This matrix shall, however, control the display of three separate BLUEFOR battalions and three Motorized Rifle Regiments. The buttons shall control the units which have been defined in a particular data stream. For example, all BLUEFOR units defined in a particular live history might be controlled by the 1st BN buttons and all BLUEFOR units defined in the simulation might be controlled by the 2nd BN buttons. The matrix shall consider the task organization of a particular stream of data, but task organization shall not be possible between data streams.

In addition to the echelon matrix buttons, two additional buttons shall be available to serve as filters for the above-mentioned matrix buttons. These buttons shall be the REAL button and the NOTIONAL button. The REAL and NOTIONAL buttons shall each control display of units in a particular data stream in accordance with operator selection of the echelon matrix buttons. The REAL button shall filter display of all real EMC/TAF units and the NOTIONAL button shall filter display of all battle simulation units. When both the REAL and NOTIONAL buttons are on, all defined units selected for display by the operator via the echelon matrix buttons shall be displayed. When the REAL button is turned off, all defined EMC/TAF units selected for display via the echelon matrix buttons will no longer be displayed. Display of the simulation units shall not be affected by the REAL button. The NOTIONAL button shall work in the same manner; however, the NOTIONAL button filters the display of the simulation defined units. With the NOTIONAL button turned on, all units selected for display via the echelon matrix buttons shall be displayed. When the NOTIONAL button is turned off, all simulation defined units shall no longer be displayed.

The ECC controller shall also have the capability of entering and manually controlling ECC-generated units which are not participants in either the live or simulated exercises. These units shall be for display purposes only and shall be controlled by a single button on the master menu.

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UNIT SYMBOLS

AIR DEFENSE   MECHANIZED INFANTRY   MEDICAL

ARMOR   ANTITANK   SIGNAL (COMMUNICATIONS)

ARTILLERY   INFANTRY   TRANSPORTATION

SELF—PROPELLED ARTILLERY   CHEMICAL DEFENSE   ARMY AVIATION

AIRBORNE INFANTRY   ARMORED CAVALRY   ELECTRONIC WARFARE

AIR CAVALRY   ENGINEER   SVC SUPPLY AND SERVICE

MISCELLANEOUS SYMBOLS

CBT CBT   }   MECH INF TASK FORCE

CBT CBT   } COMBAT TRAINS   ARMOR TASK FORCE

FLD FLD   }   MECH INF TASK FORCE

FLD FLD   } FIELD TRAINS   ARMOR TASK FORCE

FIELD HEADQUARTERS

ECHELON SYMBOLS   Contamination symbols

                                                 • ☐ nuclear
PLATOON   • • •   BRIGADE   X   contamination
COMPANY   I   DIVISION X X
BATTALION   I I   CORPS   X X X
REGIMENT   I I I

TASK FORCE/
COMPANY TEAM   e.g.   MECH INF TASK FORCE

Figure 21. ECC symbology.

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CONTROL MEASURES
POINTS

1. Checkpoint
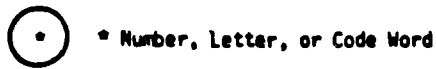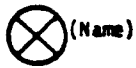
 * Number, Letter, or Code Word

2. Coordination Point

(Name)

3. Start Point (SP)

● SP(N)

4. Release Point (RP)

● RP(N)

5. Passage Point (PP)

 * Number or Letter

6. Point of Departure (PO)

 * Number or Letter

7. Remote Sensor (REMS)

(Designation)
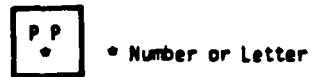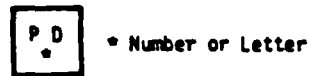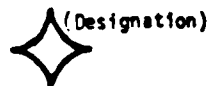
8. Preplanned Target

(Designation)
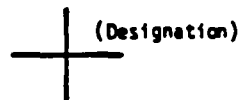
LINES

1. Basic Line

(Name) ————————————— (Name)

2. Direction of Attack or Route

(Name)
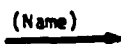
3. Axis of Advance (AA)

(Name)

4. Boundary Line

 *Unit Designation
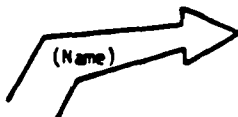
5. Forward Edge of the Main Battle Area (FEBA)

FEBAFEBA

6. Actual Trace of FEBA

FEBAFEBA
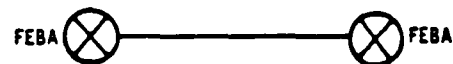
7. Line of Departure is Line of Contact (LD/LC)

LD/LCLD/LC

8. Limit of Advance (LOA)

Limit of Advance
—————————————
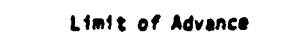
Figure 21. ECC symbology (continued).

CONTROL MEASURES
LINES

9. Line of Departure (LD)

LD ——————————— LD

10. Phase Line (PL)

PL _____ PL
(Name)   (Name)

11. Fire Support Coordination Line (FSCL)

FSCL (Unit Designation)
    050030Z APR

12. Restrictive Fire Line (RFL)

RFL (Unit Designation)
    170030Z APR

AREAS

1. Basic Area

(NAME)

2. Area of Operation (AO)

(NAME)

3. Assembly Area (AA)

3-33 ⊠

4. Attack Position

ATK
(NAME)

13. Tank Ditch

(No.) ▼▼▼▼▼

14. Coordinated Fire Line (CFL)

CFL (Unit Designation)
    120030Z APR

15. Probable Line of Deployment

PLD————————————PLD

16. Main Supply Route (MSR)

MSR (Name)

5. Drop Zone (DZ)

DZ
(NAME)
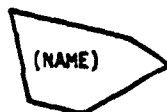
6. Fire Support Base (FSB)

(NAME)

7. Landing Zone (LZ)

LZ
(NAME)
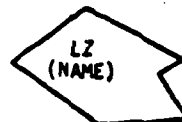
8. Forward Arming and Refueling Point (FARP)

FARP

Figure 21. ECC symbology (continued).

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9. Objective

OBJ
(NAME)

10. Patrol Base

(NAME)

11. Pickup Zone (PZ)

PZ
(NAME)

12. Scatterable Minefield (SM)

SM — SM
131600Z APR
SM — SM
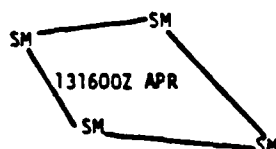
- DTG designates self-destruction time.
- Symbols for types of mines (anti-tank, anti-personnel) are entered withing boundaries.

13. Support Area

(NAME)

14. Group of Targets

(NAME)
(DESIG)
(DESIG)
(DESIG)

15. Restrictive Fire Area (RFA)

RFA
(UNIT DESIGNATION)
051000-
051430

16. No Fire Area (NFA)

NFA
(UNIT DESIG)
EFF 050030Z APR
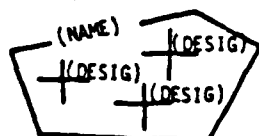
17. Contaminated Area

(NAME)

18. Battle Position

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19. Minefield

a. Gap

b. Passage Lane

Figure 21. ECC symbology (continued).

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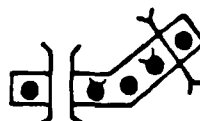
ENGAGEMENT VECTORS

$\Longrightarrow$ UNIT ENGAGEMENT

[XXXXX] INDIRECT FIRE IMPACT POINT

[XXXXX] MORTAR FIRE IMPACT POINT

[XXXXX] SMOKE MISSION IMPACT POINT

INTELLIGENCE

Symbol		Symbol		Symbol	
⊟	TANK	⚑	TOW SAGGER	⊤	HELICOPTER
◇	APC BMP BRDM	⊤	155 MM GUN 152 MM HOWITZER 122 MM HOWITZER	⬆	FIGHTER
⬓	TRUCK	⊥	MANPACK	✦	Remote Sensor (REMS)

INCLUDE number detected next to symbol (e.g., 3⊟)

⊠ Detected unit   ◯ Weather type

Figure 21. ECC symbology (continued).

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OBSTACLES

Minefield

Crater

General Mass

Concertina

Fixed Wall

Ditch

Figure 21. ECC symbology (continued).

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1. Radiological Marker

ATOM (DOSE RATE)
      (DATE)
      (TIME)
      (BURST TIME)
      (BURST DATE)

2. Nuclear Explosion

SIZE
DTG
YIELD
HOB*

*Height of Burst

3. Radiation Contours

1000 rad/hr
300 rad/hr
100 rad/hr
30 rad/hr
3 rad/hr
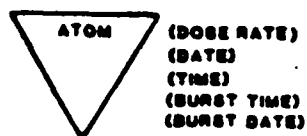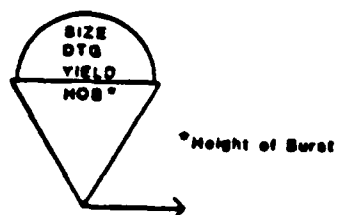
4. Prompt Effects Display

Tank
APC's
Troops in Open
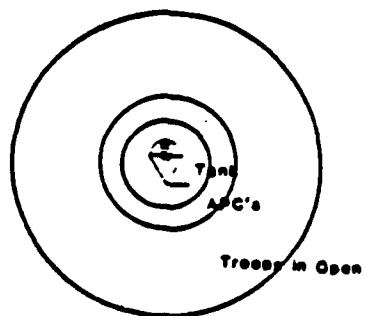
5. Fallout Prediction
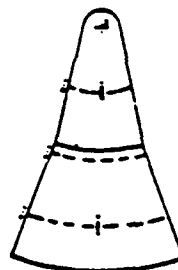
Figure 21. ECC symbology (concluded).

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Unit contamination indicators shall be displayed whenever a unit's radiation dose reaches 70 cGy The contamination indicator shall consist of a solid white circle indicating nuclear contamination. This indicator shall be displayed on the left of the unit symbol display, as shown in Figure 21.

The display of symbology other than units shall be controlled by appropriate buttons on the master menu.

2.3.7 Unit Status Displays - The following unit status displays, as defined above, shall be provided:

1. Task Organization

2. Fire Support Log

3. Intelligence Log

4. Prescheduled Event Log

5. NBC Report Log

6. Decontamination Log

7. Unit Radiation Status

2.3.8 Alerts and Free Format Messages - Alert messages are fixed format messages which shall be generated when key events are encountered that should be brought to the immediate attention of the controller. The definition of alert message fields adhere to the following conventions:

- Items which are displayed in [...] are variable depending on the situation and status surrounding the alert message.

- Items which are displayed in <...> indicate this field may be repeated.

- All data items in CAPITAL LETTERS shall be supplied whenever the alert message is displayed.

- [Time] shall be expressed in hours:minutes:seconds. Although not displayed, each time shall have a date (day) associated with it.

- [Unit Identification] is composed of the unit's force designation (B=BLUEFOR, R=OPFOR and W=observer/controller).

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The following subsections define specific alert message formats.

2.3.8.1 Unit Engagements -   These messages shall provide data which inform the operator that a live EMC/TAF or a simulated unit engagement has occurred. The general format of the message shall be as follows:

    [Time] : [Firer Unit ID] : ENGAGED : [Fire Unit ID]
    e.g.,
    10:24:14 : 1/A/3-77 : ENGAGED : 2/1/1-44

2.3.8.2 Indirect Firings -   These messages shall be provided to inform the operator of the status of an impending indirect fire mission. In the event the firer is found to be out of range of its target, an alert message shall be displayed identifying the mission and its scheduled execution time.   The format of the message shall be as follows:

    [Time] : [Firing Unit;Tgt_#/Coord;Time of Execution] :
    OUT OF RANGE
    e.g.,
    10:24:00 : A/4-37;AJ002/NJ34566139;10:25:00 :
    OUT OF RANGE

For all missions determined to be within valid range, a message describing the mission and its scheduled execution time shall be displayed. For EMC/TAF missions this alert shall be provided 30 seconds prior to the scheduled mission; for battle simulation missions the alert shall be provided after the execution. The format of the message shall be as follows:

    [Time] : [Firing Unit] : [Weapon] : [Shell/Fuse] :
    [Tgt_#/Coord] : [Time of Execution]
    e.g.,
    10:24:30 : A/4-37 : 155MM : ILLUM/PD : AJ002/NJ34566139
    : 10:25:00

2.3.8.3 Nuclear Events - For each nuclear event scheduled to occur, a message describing the time the event is to occur, the target location, the height of burst and the yield shall be displayed. The message shall be displayed 30 minutes and 5 minutes prior to the event. The format of the message shall be as follows:

    [Time] : [Force] : NUCLEAR EVENT SCHEDULED TO OCCUR
    AT : [Time of Burst] : [Ground Zero] : [Height of
    Burst] : [Yield]
    e.g.,
    12:00:10 : BLUEFOR : NUCLEAR EVENT SCHEDULED TO OCCUR
    AT : 12:30:10 : NJ34566130 : Ground : 20KT

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In the event the operator chooses to cancel a scheduled
nuclear event, a message identifying the nuclear event shall
be displayed. The format of the message shall be as
follows:

    [Time] : NUCLEAR EVENT [Event ID] : CANCELLED
    e.g.,
    11:50:25 : NUCLEAR EVENT 12:30:10/20KT/NJ34566130 :
    CANCELLED

Casualty recommendation alerts shall be generated for
those units who are affected by the blast or radiation. The
format of the message shall be as follows:

    [Time] : [Unit] : PROMPT NUCLEAR EFFECTS
    PARTICIPANT CASUALTIES : OPEN [NNN%] APC [NNN%]
    TNK [NNN%] WHEELED VEHICLE [NNN%] FOXHOLE [NNN%]
    EARTH SHELTER [NNN%]
    EQUIPMENT CASUALTIES : IN USE [NNN%] OFF [NNN%]
    DISCONNECTED ANTENNAE [NNN%] SHIELDED [NNN%]

    [Time] : [Unit] : ACCUMULATED EFFECTS PARTICIPANT
    CASUALTIES : OPEN [NNN%/NNN%] APC [NNN%/NNN%]
    TNK [NNN%/NNN%] WHEELED VEHICLE [NNN%/NNN%]
    FOXHOLE [NNN%/NNN%] EARTH SHELTER [NNN%/NNN%]

All nuclear event alerts shall be provided directly
from the ECC/TAF history; this data shall not be provided
from the EMC/TAF history or the simulation.

2.3.8.4 Prescheduled Events - The presheduled events
entered by the ECC operator through the presheduled events
menu shall be displayed at the operator specified time. The
format for these cueing prompts shall be as follows:

    [Time] : [Message Originator] : [Message Type] :
    [Message Code Name] [Textual Message, up to 80 characters
    per line with a maximum of three lines of text]
    e.g.,
    10:24:35 : 132 : CC : BCOMOVE B Company Commander to move
    his command post at 12:00:00.

2.3.8.5 Free Format Messages - The means to enter free
format messages into the data base of an open exercise
segment, during real-time and historian mode operations,
shall also be available. Free format messages shall be
entered through the alphanumeric terminal and stored in the
data base in accordance with either an operator specified
time or the exercise time as displayed on the tactical
display at the time of message entry.

The Division role players may enter free format
messages to tag various key events performed by the brigade.
This data includes exercise status elements that are not

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currently available via field or simulated automated storage capabilities. For example, reports generated by the brigade may be entered as required. In addition, time-tagged events to be displayed as a cueing device shall be entered as free format messages.

Free format messages shall consist of no more than three lines of text with 80 characters per line. Header information (unit ID, controller ID and message subject, etc.) should, as a matter of standard operating procedure, be included as part of the free format message.

IDCC shall provide the means to filter (for display purposes only) alert messages by tactical and operational categories. Within these categories, messages shall be ordered chronologically.

1. Tactical Categories

   - Maneuver

   - Fire Support

   - Intelligence

   - Mobility/Countermobility

   - Combat Service Support

   - Air Defense

   - Command, Control and Communications

2. Operational Categories

   - System Status

   - Video Data Log

   - COMMO Data Log

   - Digital Data Log

3. Operator Station ID

2.3.9 AAR Processing – The same AAR capabilities specified in the Requirements Design Specificatino for the 500 Player CIS system shall be provided at the ECC stations. These features shall be used to create AARs for the brigade and CPX battalion TOCs from the ECC/TAF history.

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SECTION 3
SOFTWARE REQUIREMENTS FOR EMC/TAF

All requirements specified in the Core Instrumentation Subsystem Requirements Design Specification (RDS) (NTC-1221-18) dated 24 May 1982 with Live Fire Supplement dated 1 December 1982 and the Requirements Design Specification for the Addition of Nuclear and Chemical Capabilities to the National Training Center (NTC) Core Instrumentation Subsystem (CIS) dated 13 April 1984 shall be met in the EMC/TAF software used for the ECC demonstration. Movement and engagement data for the EMC/TAF history shall be provided through the use of raw data tapes from the NTC exercise conducted during the period 23 April 1984 through 5 May 1984. The EMC/TAF software shall provide the following data to the ECC/TAF histories:

1. Unit Definitions (USVT and Unit ID stream data messages)

2. Unit Task Organizations (USVT and Unit Redesignation stream data messages)

3. Unit Locations (Ground Unit position location stream data messages)

4. Unit Engagement Data (Unit Engagement stream data messages)

5. Indirect Firing Data (IFCAS Target Engagement, IFCAS Alert stream data messages and History Fire Support Log)

6. Unit Radiation Status

In addition, the EMC/TAF software must provide for the capability of executing nuclear events which have been defined at the ECC station.

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SECTION 4
SOFTWARE REQUIREMENTS FOR THE BATTLE SIMULATION MODEL

For the demonstration, the ARTBASS model will be used to simulate battlefield events which occur for a single BLUEFOR battalion and an OPFOR motorized rifle regiment. The following ARTBASS menus, and associated processing, as detailed in the "Requirements Design Specification for the Addition of Nuclear and Chemical capabilities to the Army Training Battle Simulation System (ARTBASS)" shall be provided for the demonstration:

1. Simulation Control (except for Post-Exercise Summary capabilities)

2. Unit Activations/Deactivations

3. Unit Location

4. Maneuver Control

5. Support Fire

6. Direct Fire

7. Air Mission

8. Obstacle (i.e., minefield, tank ditch)

9. Control Measures

The remainder of the menus (Weather, Alert Routing, Task Organization) shall not be required for the demonstration.

The simulation model shall provide the following data to the ECC history for the generation of appropriate alerts and graphics at the ECC station:

1. Air and Ground Unit Locations: Time, Unit ID, UTM Coordinates

2. Unit Engagements: Time, Firing Unit ID, Fire Unit ID

3. Indirect Firing Data: Time, Firing Unit, Target Location for out of range missions; Time, Firing Unit, Weapon, Ammunition, Target Location for fired missions.

4. Unit Radiation Status: Time, Unit ID, Radiation Level

In addition, ARTBASS software shall process and execute nuclear events defined at the ECC station.

Equipment status, personnel status, and supply status data shall not be required for the demonstration.

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ATTACHMENT 1
DEMONSTRATION REPORT FOR THE
INTEGRATED BATTLEFIELD COMMAND
AND CONTROL SIMULATION

1.0 INTRODUCTION

In accordance with Phase III of the Defense Nuclear
Agency (DNA) contract, the Integrated Battlefield Command
and Control Simulation (IBCCS) system concept demonstration
was held on 19 November 1984 at the NTC Software Development
Facility in La Jolla. Presented before DNA and Training
Doctrine (TRADOC) representatives was a proof-of-concept
demonstration in which data from both live and simulated
histories was combined to form a single, coordinated battle
at a Division-level ECC (Exercise, Coordination and Control)
station.

The demonstration was developed based upon a National
Training Center (NTC) operational training scenario. Raw
data tapes from the 15 April 1984 rotation were used to
drive the Exercise Monitoring and Control/Training Analysis
and Feedback (EMC/TAF) software for one BLUEFOR battalion
and one OPFOR Mortorized Rifle Regiment (MRR). The Army
Training Battle Simulation System (ARTBASS) was used to
provide simulated data for one BLUEFOR and one OPFOR MRR.
The ECC scenario combined the EMC/TAF units and the ARTBASS
units resulting in two OPFOR Motorized Rifle Regiments
(MRRs) and two BLUEFOR battalions.

The primary purpose of the November demonstration was
to verify the ECC concept and show the feasibility of
combining live and simulated data for the purpose of
training the Brigade staff. The demonstration consisted of
two parts: a closed history based upon a scenario developed
for the demonstration and a participatory portion which
provided for utilization of menus and collection of data in
real-time. This document summarizes the ECC scenario and
capabilities which demonstrated the NTC Integrated
Battlefield Training concept.

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2.0 ECC SCENARIO

2.1 Review of ECC Control

In order to assist in the coordination of simulation
and EMC/TAF exercises, and in the preparation of AARs, a
special exercise history was created. This history
contained unit level data from both live and simulated
battalions and from the data entered into the history by the
operator through use of interactive menus.

For purposes of this demonstration, the ECC station
only provided control for the definition and execution of
nuclear events and ECC unit definition and location. For
all other functions, the ECC station reviewed situations
based upon data received from EMC/TAF and ARTBASS on real
and notional units, respectively. Data logging capabilities
were also provided at the ECC station allowing the ECC
operator to record the receipt of pertinent information for
later display and review.

2.2 ECC Scenario Overview

Based on the 15 April 1984 NTC EMC/TAF operational
training scenario, the following describes the overall
operational plan developed for the ECC demonstration:

15APR84

54th Mech Div defends in sector with two brigades
abreast: 2nd Bde (ARTBASS) in the north; 1st Bde (ES) in
the south. Bdes allow no penetration of PL BOSUN. 3rd Bde
(ECC) remains Div reserve; occupies battle positions to the
rear of 1st and 2nd Bdes. 1-23 Cav (ECC) screens Div
southern flank.

172 MRR (ARTBASS) in the north, conducts the main attack at
250100 Apr 84 with 3 MRBs. The regiment's immediate
objective is NK 2901. The 52 MRR, (ES) conducts the
supporting attack in the south, attacks at 250100 Apr 84
with 3 MRBs. The regiment's immediate objective is vic NK
3593. The subsequent objective is NK 2901.

250100 Apr 84

Enemy (OPFOR) nuclear weapon (surface burst) detonated north
of MECH DIV coordinates TBD.

BLUEFOR receive NBC-2 and 3 reports from DIV HQ.

ENEMY (OPFOR) conducts attack. Nuclear weapon release
received by 2nd Bde. STRIKWARN issued by DIV. Weapon
planned and used (.2KT air burst) on OPFOR vicinity TBD to
blunt 172 MRR attack in 2nd Bde sector.

Figure 22 is a Ft. Irwin map illustrating the initial location of all defined units (EMC/TAF, ARTBASS, and ECC) and appropriate control measures displayed at the ECC station.
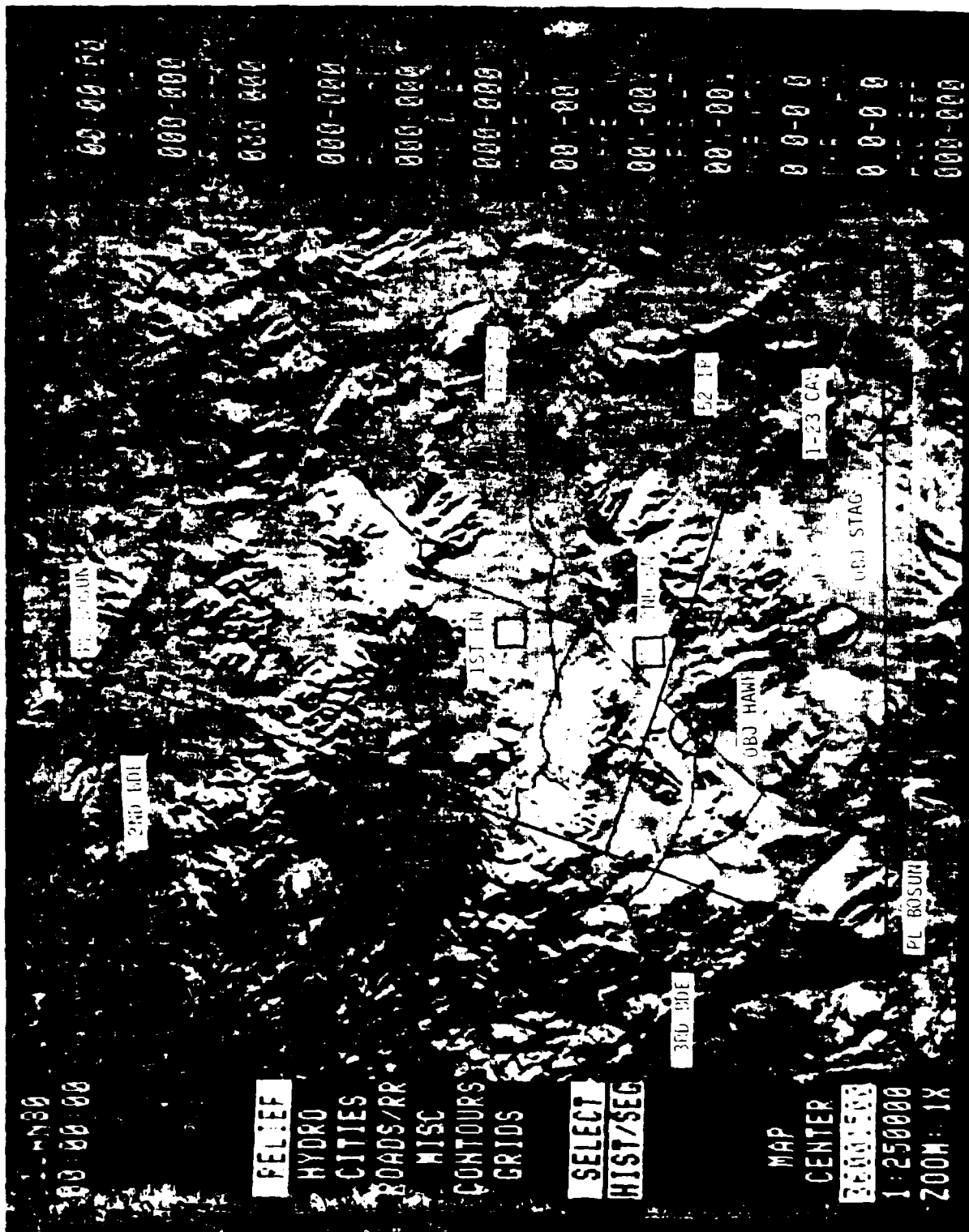
Figure 22. ECC situation display.

3.0 DEMONSTRATION OF ECC CAPABILITIES

The following paragraphs describe operations included in the the history for the demonstration.

3.1 History Initialization

The initialization process involved defining all unit information for ECC (notional), EMC/TAF (real) and ARTBASS (simulated) units as shown in Figure 23. The EMC/TAF unit information as defined by NTC operators for the 15 Apr 1984 history was the same used in the ECC history with the exception that the BLUEFOR Battalion was line organized to the ECC Brigade Under Training. The simulated unit information was created and defined in accordance with the demonstration scenario with the simulated BLUEFOR Battalion also line organized to the ECC Brigade Under Training.

3.2 Unit Engagement Processing

Unit engagement data was collected from the EMC/TAF history and the ARTBASS scenario and shown at the ECC controller station.

3.3 Support Fire Processing

Conventional indirect fire engagements, as defined for the ARTBASS scenario and EMC/TAF history, were displayed at the ECC station and appropriate alerts were provided. In addition, nuclear events were defined at the ECC station which nuclear caused events to occur in the ARTBASS scenario and EMC/TAF history.

3.4 Unit Position

The ECC notional unit positions were defined via the Unit Position interactive menu. The EMC/TAF history provided the ECC/TAF history with the center of mass for each defined real unit. ARTBASS unit data consists of only leaf level units. Following receipt of the unit information from ARTBASS, ECC/TAF calculated the center of mass of the defined higher echelon units.

3.5 Control Measures

OPFOR and BLUEFOR control measures (i.e, objectives, phase lines, tank ditch, minefield, axis of advance, echelon boundary lines) were defined in accordance with the developed scenario based on the 15 Apr 1984 NTC training history.

3.6 Preschedueled Events

The ECC operator defined preplanned scenario event messages via the Preschedueled Event menu. These events provided

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BLUEFOR - REAL

1/034 ARM/BN

A/1-034	MI/CO	1 MANPACK
CP/A/1-034	MI/CP	3 APC W/M-2
1/A/1-034	MI/PLT	4 APC W/M-2
2/A/1-034	MI/PLT	4 APC W/M-2
3/A/1-034	MI/PLT	4 APC W/M-2

B/1-034	ARM/PLT	
CP/B/1-034	ARM/CP	2 TANK
1/B/1-034	ARM/PLT	4 TANK
2/B/1-034	ARM/PLT	4 TANK
3/B/1-034	ARM/PLT	4 TANK

C/1-034	MI/CP	1 MANPACK
CP/C/1-034	MI/PLT	2 APC W/M-2
1/C/1-034	MI/PLT	4 APC W/M-2
2/C/1-034	MI/PLT	4 APC W/M-2
3/C/1-034	MI/PLT	4 APC W/M-2

D/1-034	ARM/CP	
CP/D/1-034	ARM/PLT	2 TANK
1/D/1-034	ARM/PLT	4 TANK
2/D/1-034	ARM/PLT	4 TANK
3/D/1-034	ARM/PLT	4 TANK

SCT/1-034	ARM/PLT	1 MANPACK	3 APC W/M-2	3 APC W/TOW
EW/1-034	EW/PLT	3 RADAR		
4.2/1-034	ARTY/4.2PLT	3 107MM MORTAR		

Figure 23. ECC units.

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```
TOC/1-034    MI/TOC

BN TOC       MI/PLT        2 TANK    6 APC W/M-2    7 FIGHTER/BOMBER
                           1 MANPACK W/VIPER


CBT TRNS 1-034  ARM/CBT TRNS

1-034 MED   MED/PLT        7 APC W/M-2

CBT TRNS S+S  S+S/PLT      1 APC W/M-2      9 TRUCK

FLD TRNS 1-034   MI        1 TRUCK

DIVAD  1-034  AD/PLT

1-34 ENG    ENG/PLT    3 APC W/M-2    1 TRUCK

AT/1-034    AT/PLT  8 APC W/TOW

DS BN    ARTY/BN

DSA         ARTY/BTRY    2 155MM SP HOW

DSB         ARTY/BTRY    2 155MM SP HOW

DSC         ARTY/BTRY    2 155MM SP HOW


1-042 BN    ARTY/BN

A/1-042     ARTY/BTRY      (NO EQUIP. ASSIGNED)

B/1-042     ARTY/BTRY

C/1-042     ARTY/BTRY
```

Figure 23. ECC units (continued).

NAME	TYP/ECH	#PERS.		EQUIPMENT	
52 REGIMENT					
52	ARM/REG	3 RECON	1 BMP W/ SAG		
1/52	ARM/BN	1 BMP	22 TANK	46 BMP W/SAG	
		10 MANPACK	4 HELICOPTER	12 122 SP HOW	
A/1/52	ARM/CO				
B/1/52	ARM/CO				
C/1/52	ARM/CO				
2/52	ARM/BN	12 TANK	6 BRDMS	25 BMP W/SAG	
		6 ZSU			
A/2/52	ARM/CO				
B/2/52	ARM/CO				
C/2/52	ARM/CO				
3/52	ARM/BN	25 BMP W/SAG	12 TANK		
A/3/52	ARM/CO				
B/3/52	ARM/CO				
C/3/52	ARM/CO				
1/52 RECON	ARM/CO	6 BMP W/SAG	4 BRDM		
2-68 130M	ARTY/BN	1 152 GUN HOW			
U/I MRL (122M)	ARTY/BN	1 152 GUN HOW			
1-28 (122SP)	ARTY/BN	1 122 SP HOW			
2-28 (122SP)	ARTY/BN	1 122 SP HOW			
3-28 (122SP)	ARTY/BN	1 152 SP WHO			
U/I/122 SP	ARTY/BN				
TOC REG	REG/ARM				

Figure 23. ECC units (continued).

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BLUEFOR - NOTIONAL

1-3 ARMOR BN W/ 1-8 MECH BN ATTACHED

CP/A/1-3
1/A/1-3
2/A/1-3
3/A/1-3
A/1-8

CP/B/1-3
1/B/1-3
2/B/1-3
3/B/1-3
B/1-8

CP/C/1-3
1/C/1-3
2/C/1-3
3/C/1-3
C/1-8

CP/D/1-3
1/D/1-3
2/D/1-3
3/D/1-3
D/1-8

SCT/1-3
1-3 MED   MED PLT
CBT TRANS   MAINT/SEC
DIVAD 1-3   AD/PLT
AT/1-3   MECH/AT
A/2-618   ARTY/BTRY
B/2-618   ARTY/BTRY
C/2-618   ARTY/BTRY

Figure 23. ECC units (continued).

```
1/172 BN
--------
A/1/172       MI/CO
B/1/172       MI/CO
C/1/172       MI/CO

2/172 BN
--------

A/2/172       MI/CO
B/2/172       MI/CO
C/2/172       MI/CO

TK/172 BN
--------
A/TK/172      ARM/CO
B/TK/172      ARM/CO
C/TK/172      ARM/CO

3/172 RECON   MI/CO
1/172 ENG     CBT/PLT
AA PLT172     AD/CO

HOW BN/172    ARTY/BN
172 HOW/49    ARTY/BN
50 GH BN/49   ARTY/BN

RD ASP 1    CBTTRNS/CO
```

Figure 23. ECC units (concluded).

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controller cues as to events which should be occurring in the training scenario (e.g., release of FRAGOs, release authority for use of nuclear weapons, orders to begin certain types of operations). The defined events were displayed on the side display at the operator-defined time to act as a cueing prompt and were also included in the Prescheduled Event Log.

3.7 Free Format Messages

Free-format messages, which include the same features available in the NTC CIS free format message capability, were demonstrated in the participatory portion of the demonstration. Messages could be entered and sent to either another station or the history itself.

3.8 NBC Reports

Selected NBC reports, as defined in the ECC demonstration scenario, were logged and available for replay during the demonstration.

3.9 Intelligence

Intelligence alert data as received by the ARTBASS operator was relayed to the ECC operator and then entered into the ECC history via the ECC Intelligence menu. Based upon these inputs, Intelligence Log statistical display and appropriate intelligence graphics were available for display.

3.9.1 Statistical Reports - The following statistical reports, primarily logs, were demonstrated:

- Task Organization

- Fire Support Log

- Intelligence Log

- Prescheduled Event Log

- NBC Report Log

- Nuclear Event Log

- Unit Radiation Status

These reports were generated based upon the data derived from the EMC/TAF history, the ARTBASS scenario and operator entries at the ECC station.

3.9.2 Graphical Displays - The following ECC graphical displays were demonstrated:

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- Unit display via echelon matrix buttons
- Control measures
- Fallout prediction display
- Nuclear prompt effects display
- Radiation contours
- Intelligence
- Engagement vectors
- Indirect firing displays

3.9.2.1 Alerts - The following alerts were demonstrated:

1. Unit engagements

2. Indirect firings (as received from ARTBASS and EMC/TAF)

3. Nuclear events

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4.0 CONCLUSION

The demonstration served to show the feasibility of presenting a Division-level scenario at an NTC station, based upon inputs from both a live and simulated data flow. The use of the ECC station as a vehicle for providing AARs to command staffs being trained with the simulation and as an exercise coordination station were discussed. The operation concept and the prototype software were demonstrated.

ABBREVIATIONS AND ACRONYMS

AAR	After Action Review
APC	Armored Personnel Carrier
ARTBASS	Army Training Battle Simulation System
BLUEFOR	Blue Force
CIS	Core Instrumentation Subsystem
CPX	Command Post Exercise
DNA	Defense Nuclear Agency
DTG	Date Time Group
ECC	Exercise Coordination and Control
EMC	Exercise Monitoring and Control
HOB	Height of Burst
IBCCS	Integrated Battlefield Command and Control Simulation
IFCAS	Indirect Fire Casualty Assessment System
MRR	Motorized Rifle Regiment
NTC	National Training Center
OPFOR	Opposing Force
RDS	Requirements Design Specification
RS	Radiation Status
USVT	Unit State Vector Table
UTM	Universal Transverse Mercator
TOC	Tactical Operations Center

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